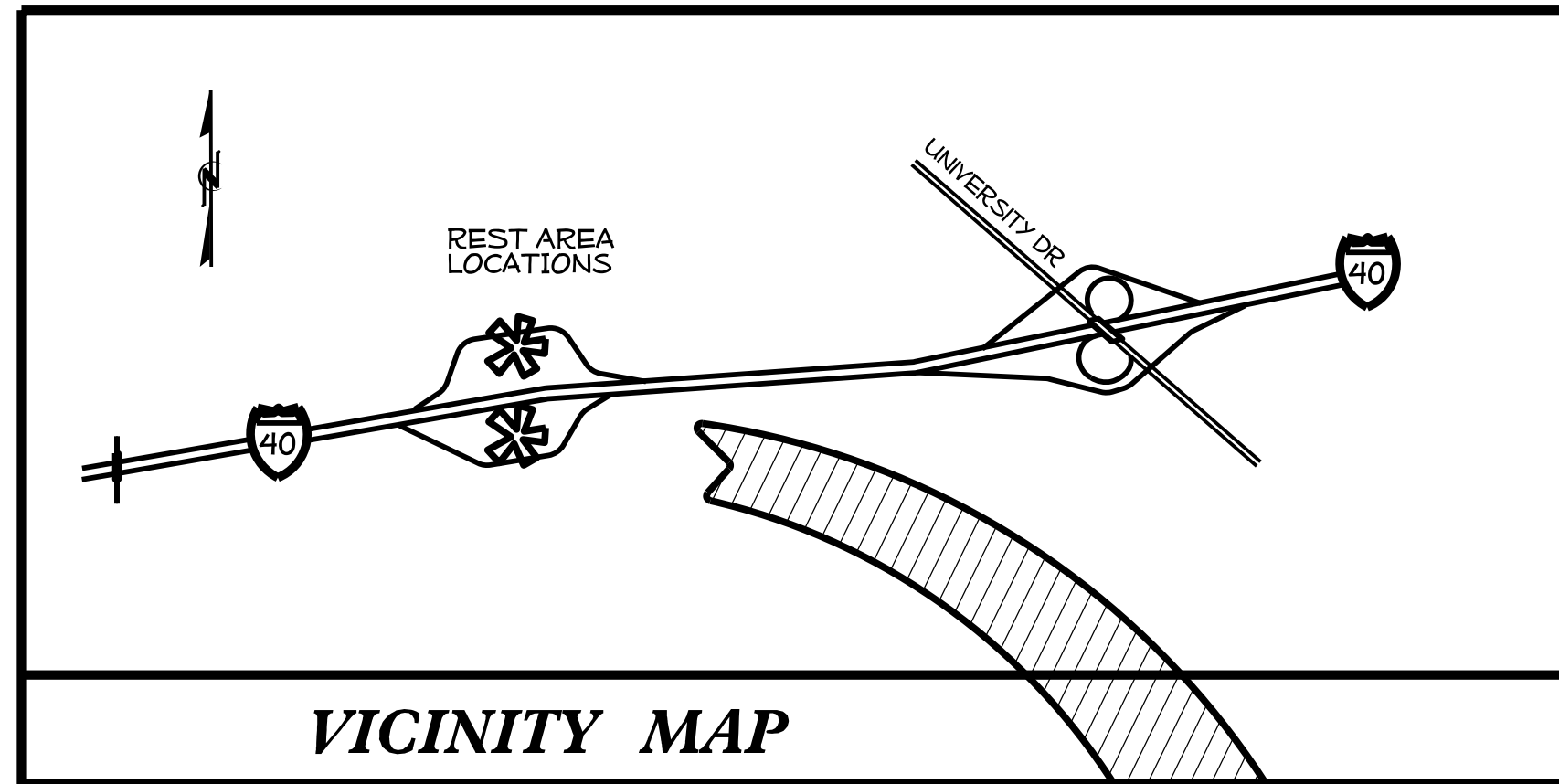
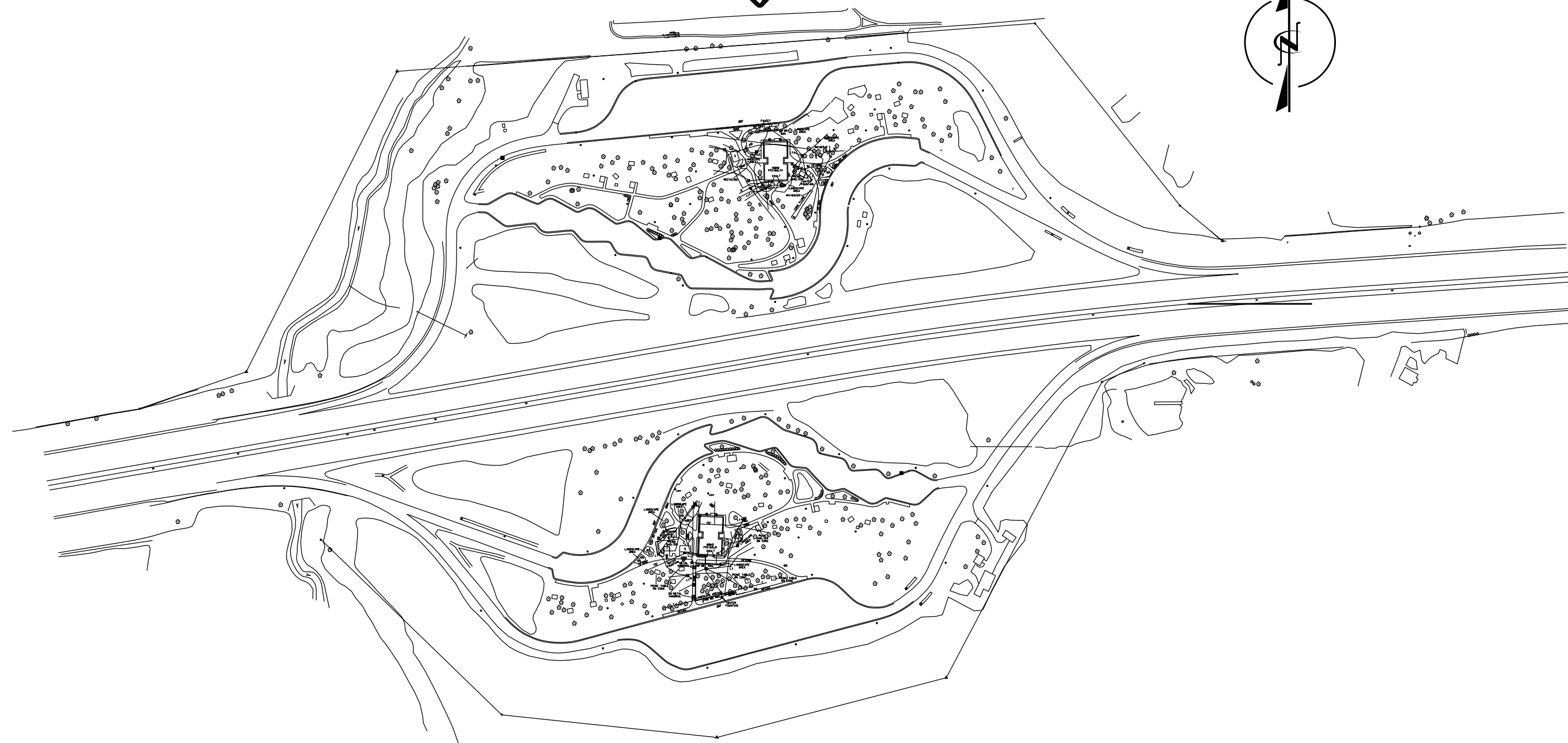


Alamance County – I-40 Rest Areas

Contract :



VICINITY MAP



STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

ALAMANCE COUNTY

INTERSTATE REST AREA

Location: I-40, 1 Mile West of University Dr., near Elon, NC

Type of Work: Site Development and Vending Bldg. Construction

INDEX OF SHEETS SITE DEVELOPMENT & ARCHITECTURAL PLANS

LT TITLE SHEET

SITE DEVELOPMENT PLANS

LT-01 SITE DEVELOPMENT SUMMARY OF QUANTITIES
L-01 SBL SITE PLAN
L-02 NBL SITE PLAN
L-03 SBL DEMO & STAGING PLAN
L-04 NBL DEMO & STAGING PLAN
LG-01 SBL GRADING & DRAINAGE PLAN
LG-02 NBL GRADING & DRAINAGE PLAN
LL-01 SBL LAYOUT & DIMENSION PLAN
LL-02 NBL LAYOUT & DIMENSION PLAN
LH-01 SBL HARDSCAPE PLAN
LH-02 NBL HARDSCAPE PLAN
LP-01 SBL LANDSCAPE PLAN
LP-02 NBL LANDSCAPE PLAN
W-1 SBL SEGMENTAL RETAINING WALL
W-2 NBL SBL RETAINING WALL
LD-01 PAVEMENT DETAILS
LD-02 SBL WATERFEATURE DETAIL
LD-03 NBL WATERFEATURE DETAIL
LD-04 DRAINAGE DETAILS
LD-05 FLAGPOLE & FENCE DETAILS
LD-06 PLANTING DETAILS

ARCHITECTURAL PLANS

T1 TITLE SHEET
T2 BUILDING CODE SUMMARY

S1 FOUNDATION PLAN; FOUNDATION DETAILS
S2 FRAMING PLAN; FRAMING DETAILS
A1.1 FLOOR PLAN; REFLECTED CEILING PLAN;
ROOF PLAN & DETAILS
A2.1 EXTERIOR ELEVATIONS
A2.2 EXISTING BUILDING ELEVATION & DETAILS
A1.3 ROOF PLAN
A2.1 EXTERIOR ELEVATIONS
A3.1 BUILDING SECTIONS
A3.2 WALL SECTIONS & DETAILS
A4.1 ROOM FINISH & DOOR SCHEDULES; DOOR ELEVATIONS;
HEAD, JAMB & SILL DETAILS


P1 PLUMBING PLAN
M1 HVAC PLAN
E1 ELECTRICAL DETAILS/SPECIFICATIONS
E2 ELECTRICAL PLANS

U1 NBL UTILITY PLAN
U2 SBL UTILITY PLAN
U3 UTILITY DETAILS

Rest Area & Site Development	Architectural/Engineering		
Roadside Environmental Unit	Facilities Management – Design	Mechanical/Elec/Plumb.:	
1557 MAIL SERVICE CENTER RALEIGH, NORTH CAROLINA 27699-1557 OFFICE (919) 707-2920 FAX (919) 715-2554	1525 MAIL SERVICE CENTER RALEIGH, NORTH CAROLINA 27699-1525 OFFICE (919) 707-4540 FAX (919) 715-0399	BURKE DESIGN GROUP 305-109 DURHAM DRIVE RALEIGH, NC 27603 (919)618-0717	

STATE NC	T.I.P. #	SHEET # 1 of 1
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		P.E.
		RW
3707.3.23		CONST.

North Carolina Department of Transportation
Division of Highways
1 South Wilmington Street Raleigh, North Carolina


I-40
Alamance Co. Rest Areas

Plans Drawn By:	KOPETSKY
Scale	n/a
Date	3 / 5 / 15
Letting Date	
2012 Standard Specifications	
Sheet Description	TITLE SHEET
Sheet #	LT

Alamance County – I-40 Rest Areas

Contract :

LINE
ITEMS

Line No.	Sec	DESCRIPTION	QTY	UNIT
1	SP	Mulch for Planting	200	CY
2	SP	Water for Planting	120	M/G
3	SP	Seeding and Mulching	2	ACR
4	SP	Temporary Construction Fence	1200	LF
5	SP	Pre emergence Herbicidal Treatment	1,800	SY
6	SP	Post emergence Herbicidal Treatment	1,800	SY
7	SP	Sodding	610	SY
8	SP	Topsoil	150	CY
9	SP	River Stone	3	TON
10	SP	Split Rail Fence	170	LF
11	SP	4" Concrete Sidewalk	200	SY
12	SP	Permeable Pavers	13,000	SF
13	SP	9" Concrete Border	10	CY
14	SP	Landscape Metal Edging	200	LF
15	SP	3" PVC Sleeve	200	LF
16	SP	SBL Stormwater Drainage System	1	LS
17	SP	NBL Stormwater Drainage System	1	LS
18	SP	SBL Water Feature	1	LS
19	SP	NBL Water Feature	1	LS
20	SP	SBL Landscape and Site Grading	1	LS
21	SP	NBL Landscape and Site Grading	1	LS
22	SP	Segmental Gravity Retaining Walls	300	SF
23	SP	MSE Retaining Walls	550	SF
24	SP	Picnic Table	2	EA
25	SP	Park Bench	9	EA
26	SP	SBL Site Demolition	1	LS
27	SP	NBL Site Demolition	1	LS
28	SP	Placement of Boulders	21	EA
29	SP	SBL Landscape Planting	1	LS
30	SP	NBL Landscape Planting	1	LS
31	SP	Relocate Newspaper Box	2	EA
32	SP	Ornamental Tree Lights	1	LS
33	235	Unclassified Excavation	500	CY
34	230	Borrow Excavation	300	CY
35	SP	Placement of Boulders	21	EA
36	1610	Sediment Control Stone	2	TON
37	1632	1/4" Hardware Cloth	200	LF
38	1605	Temporary Silt Fence	200	LF
39	SP	Tree Protection Fence	400	LF
40	SP	SBL Vending Building Construction	1	LS
41	SP	NBL Vending Building Construction	1	LS
42	SP	SBL Irrigation (ADD ALTERNATE)	1	LS
43	SP	NBL Irrigation (ADD ALTERNATE)	1	LS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ALAMANCE COUNTY

INTERSTATE REST AREA

Location: I-40, 1 Mile West of University Dr., near Elon, NC

Type of Work: Site Development Plans

LANDSCAPE PLANTS

SBL QTY.	NBL QTY.	UNIT	KEY	BOTANICAL NAME	COMMON NAME	FURNISH	REMARKS	
Trees								
0	1	EA	AS	<i>Acer palmatum</i> 'Sango Kaku'	Sango Kaku Japanese Maple	6-8', B&B/Cont		
4	1	EA	CC	<i>Cercis canadensis</i> 'Royal White'	Royal White Redbud	6-8', B&B		
2	0	EA	CF	<i>Cornus florida</i> 'Cherokee Chief'	Cherokee Chief Flowering Dogwood	6-8', B&B		
0	2	EA	IN	<i>Ilex x 'Nellie R Stevens'</i>	Nellie R Stevens Holly	6-8', B&B		
5	6	EA	PK	<i>Prunus serrulata</i> 'Kwanzan'	Kwanzan Cherry	8-10', 1.5 - 1.75" cal. B&B		
3	2	EA	QS	<i>Quercus shumardii</i>	Shumard Oak	16-18', 4" cal. B&B		
Shrubs								
37	8	EA	AA	<i>Azalea x 'Roblec'</i>	Autumn Carnation (Encore) Azalea	#3 Cont		
25	16	EA	AD	<i>Abelia grandiflora</i> 'Rose Creek'	Rose Creek Abelia	#3 Cont		
0	4	EA	CD	<i>Caryopteris x clandonensis</i> 'Dark Knight'	Dark Knight Bluebeard	#3 Cont	3 1/2" O.C.	
38	8	EA	CH	<i>Cephalotaxus harringtonia</i> 'Prostrata'	Spreading Japanese Yew	#3 Cont	3' O.C.	
7	4	EA	CS	<i>Camellia x 'Winter's Charm'</i>	Winter's Charm Hardy Camellia	#3 Cont	3' O.C.	
3	8	EA	DO	<i>Daphne odora</i> 'Aureo-marginata'	Variegated Winter Daphne	#3 Cont	3' O.C.	
11	10	EA	IC	<i>Ilex crenata</i> 'Compacta'	Compact Japanese Holly	#3 Cont	3' O.C.	
12	14	EA	JC	<i>Juniperus procumbens</i> 'Nana'	Dwarf Japanese Garden Juniper	#1 Cont	3' O.C.	
4	2	EA	JS	<i>Juniperus chinensis</i> 'Spartan'	Spartan Juniper	#7 Cont	4' O.C.	
2	2	EA	LC	<i>Loropetalum chinense</i> 'Blush'	Blush Loropetalum	#7 Cont	Tree Form	
48	16	EA	NG	<i>Nandina domestica</i> 'Gulf Stream'	Gulf Stream Nandina	#3 Cont	3' O.C.	
12	6	EA	RR	<i>Rosa x 'Radko'</i>	Double Knockout Red Rose	#3 Cont	3' O.C.	
Grasses								
29	10	EA	JE	<i>Juncus effusus</i>	Soft Rush	#1 Cont		
251	171	EA	LB	<i>Liriope muscari</i> 'Big Blue'	Big Blue Liriope	#1 Cont	12" O.C.	
0	59	EA	LV	<i>Liriope muscari</i> 'Variegata'	Variegated Liriope	#1 Cont	12" O.C.	
9	16	EA	MC	<i>Muhlenbergia capillaris</i>	Pink Muhly Grass	#1 Cont	12" O.C.	
0	118	EA	OJ	<i>Ophiopogon japonicus</i>	Mondo Grass	#1 Cont	12" O.C.	
32	23	EA	PS	<i>Panicum virgatum</i> 'Squaw'	Squaw Switch Grass	#3 Cont		
Perennials								
21	0	EA	DC	<i>Delosperma cooperi</i>	Hardy Ice Plant	#1 Cont	12" O.C.	
12	7	EA	EK	<i>Echinacea purpurea</i> 'Kim's Knee High'	Kim's Knee Hign Coneflower	#1 Cont	18" O.C.	
45	0	EA	HO	<i>Hemerocallis</i> 'Orange Crush'	Orange Crush Daylily	#1 Cont	2' O.C.	
6	14	EA	RG	<i>Rudbeckia fulgida</i> 'Goldsturm'	Goldsturm Black-eyed Susan	#1 Cont	12" O.C.	
0	9	EA	SA	<i>Sedum spectabile</i> 'Autumn Joy'	Autumn Joy Sedum	#1 Cont	2' O.C.	
6	0	EA	WS	<i>Echinacea purpurea</i> 'White Swan'	White Swan Coneflower	#1 Cont	18" O.C.	

Rest Area & Site Development

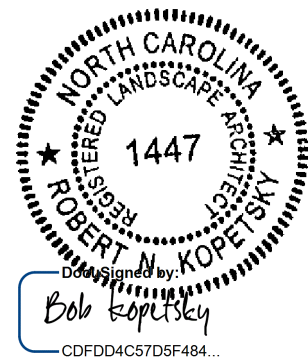
Roadside Environmental Unit

1557 MAIL SERVICE CENTER
RALEIGH, NORTH CAROLINA 27699-1557
OFFICE (919) 707-2920 FAX (919) 715-2554

Landscape Architectural Design

REU Aesthetic Engineering Section

1557 MAIL SERVICE CENTER
RALEIGH, NORTH CAROLINA 27699-1557
OFFICE (919) 707-2920 FAX (919) 715-2554



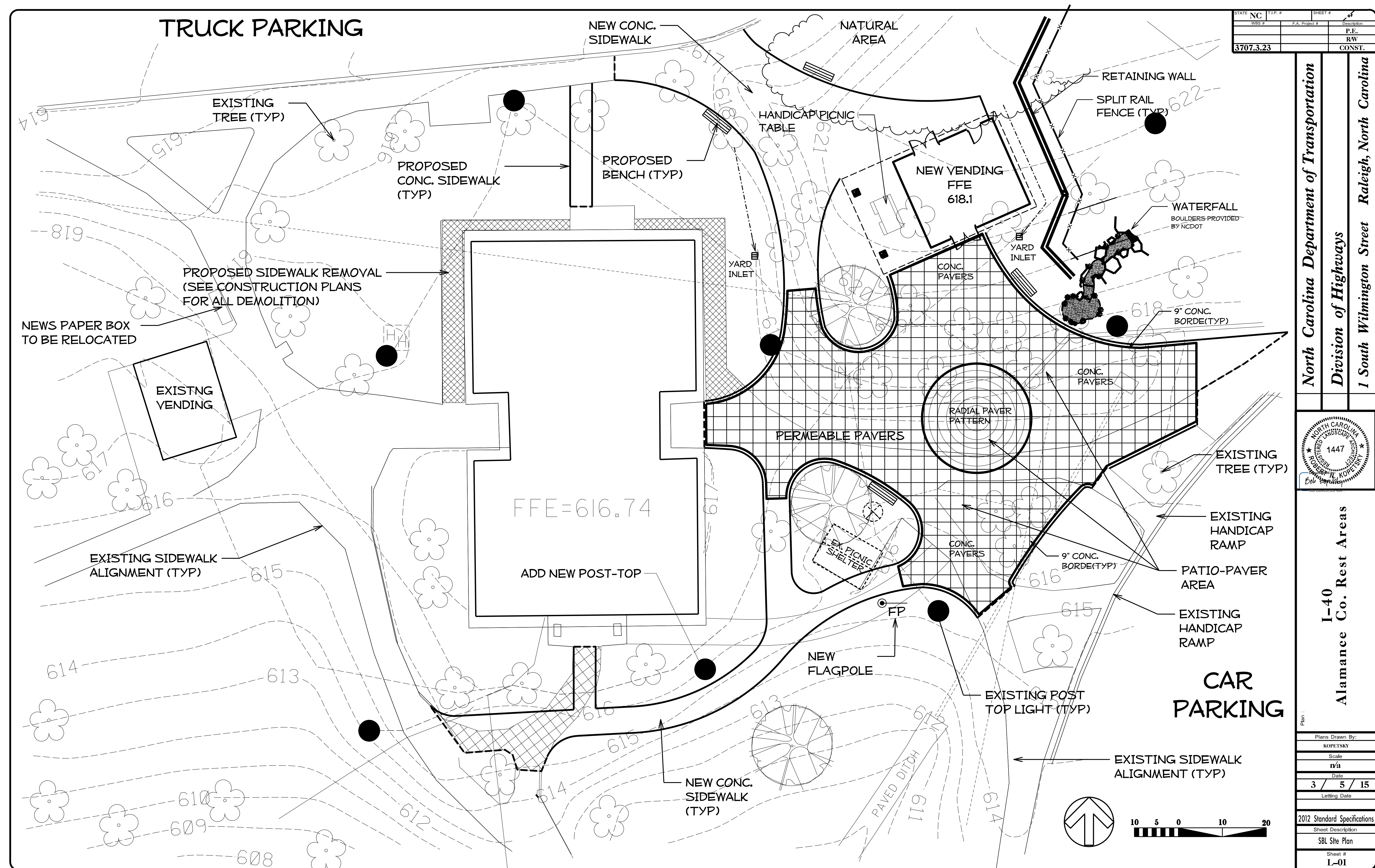
STATE NC	T.J.P. #	SHEET # 1 of 1
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		RW
3707.3.23		CONST.

North Carolina Department of Transportation
Division of Highways
1 South Wilmington Street Raleigh, North Carolina



I-40
Alamance Co. Rest Areas

Plan :
Plans Drawn By: KOPETSKY
Scale n/a
Date 3 / 5 / 15
Letting Date
2012 Standard Specifications
Sheet Description Site Development
Title Sheet
Sheet # LT-01

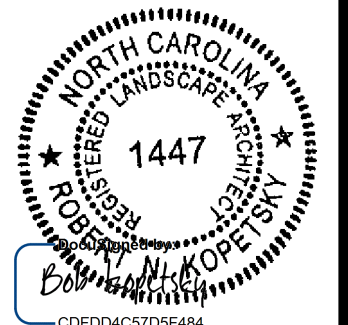


STATE NC	T.J.P. #	SHEET #
WBS #	F.A. Project #	Description
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3707.3.23		CONST.

North Carolina Department of Transportation

Division of Highways

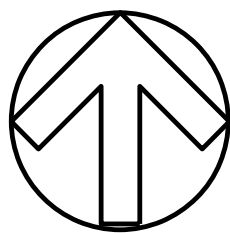
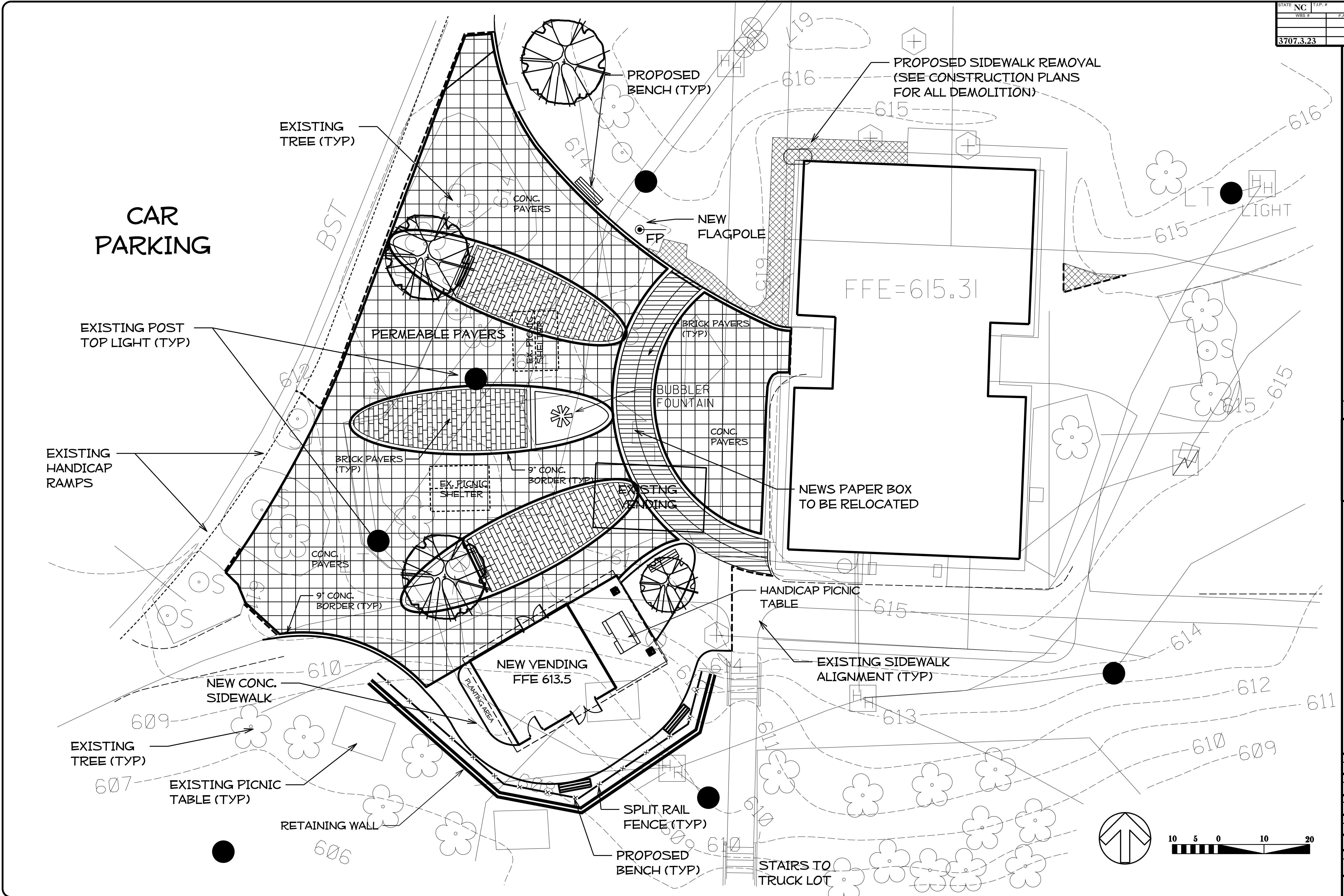
1 South Wilmington Street Raleigh, North Carolina

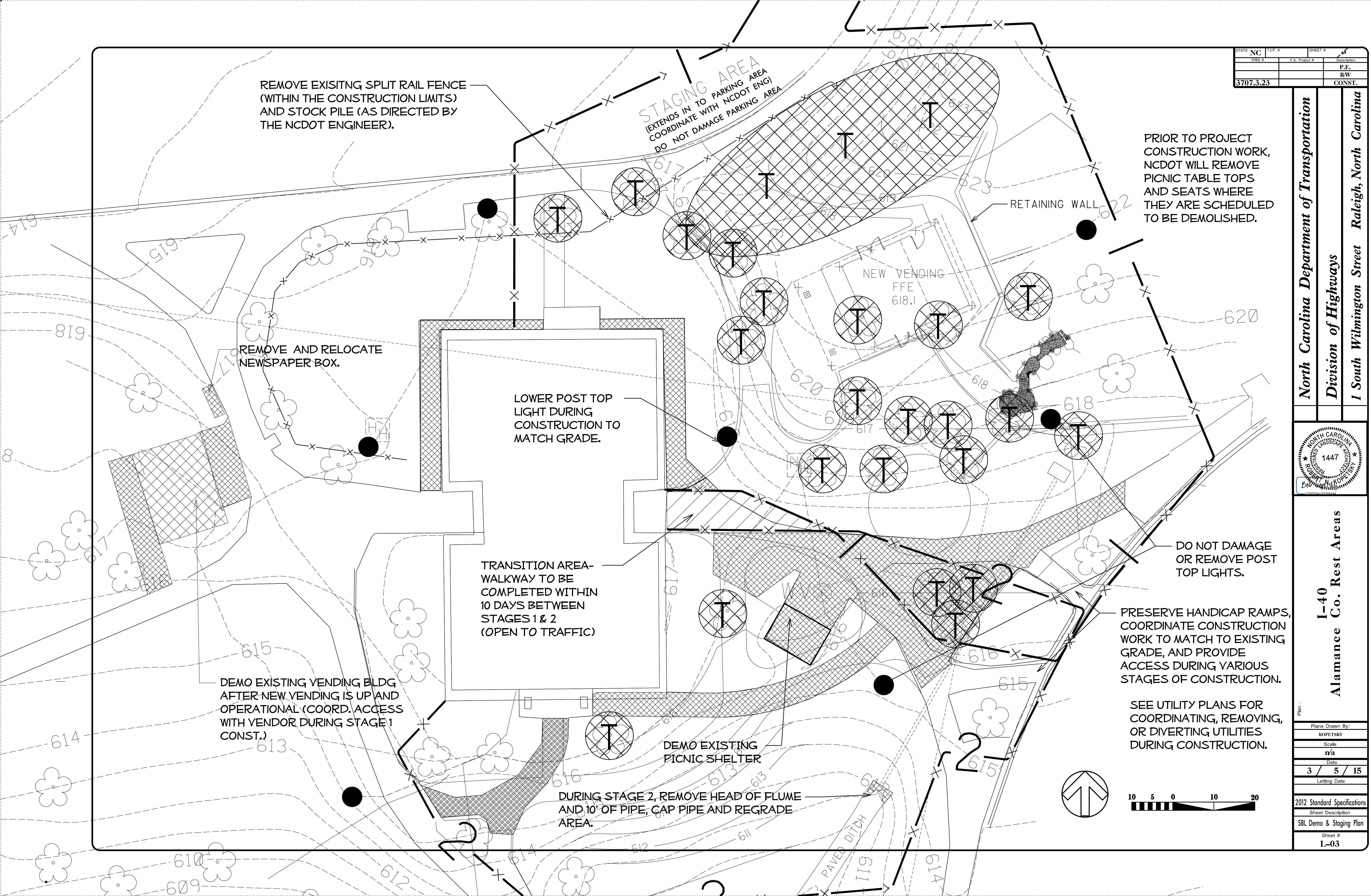


I-40

Alamance Co. Rest Areas

Plans Drawn By:	KOPETSKY
Scale:	n/a
Date:	3 / 5 / 15
Letting Date:	
2012 Standard Specifications	
Sheet Description:	NBL Site Plan
Sheet #:	L-02





REMOVE EXISTING SPLIT RAIL FENCE
(WITHIN THE CONSTRUCTION LIMITS)
AND STOCK PILE (AS DIRECTED BY
THE NCDOT ENGINEER).

STAGING AREA
(EXTENDS IN TO PARKING AREA
COORDINATE WITH NCDOT ENG)
DO NOT DAMAGE PARKING AREA

PRIOR TO PROJECT
CONSTRUCTION WORK,
NCDOT WILL REMOVE
PICNIC TABLE TOPS
AND SEATS WHERE
THEY ARE SCHEDULED
TO BE DEMOLISHED.

REMOVE AND RELOCATE
NEWSPAPER BOX.

LOWER POST TOP
LIGHT DURING
CONSTRUCTION TO
MATCH GRADE.

TRANSITION AREA-
WALKWAY TO BE
COMPLETED WITHIN
10 DAYS BETWEEN
STAGES 1 & 2
(OPEN TO TRAFFIC)

DEMO EXISTING VENDING BLDG
AFTER NEW VENDING IS UP AND
OPERATIONAL (COORD. ACCESS
WITH VENDOR DURING STAGE 1
CONST.)

DEMO EXISTING
PICNIC SHELTER

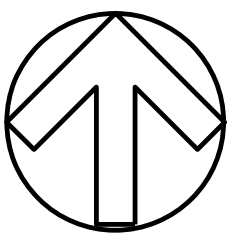
DURING STAGE 2, REMOVE HEAD OF FLUME
AND 10' OF PIPE, CAP PIPE AND REGRADE
AREA.

RETAINING WALL

DO NOT DAMAGE
OR REMOVE POST
TOP LIGHTS.

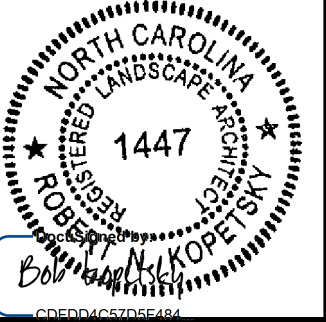
PRESERVE HANDICAP RAMPS,
COORDINATE CONSTRUCTION
WORK TO MATCH TO EXISTING
GRADE, AND PROVIDE
ACCESS DURING VARIOUS
STAGES OF CONSTRUCTION.

SEE UTILITY PLANS FOR
COORDINATING, REMOVING,
OR DIVERTING UTILITIES
DURING CONSTRUCTION.



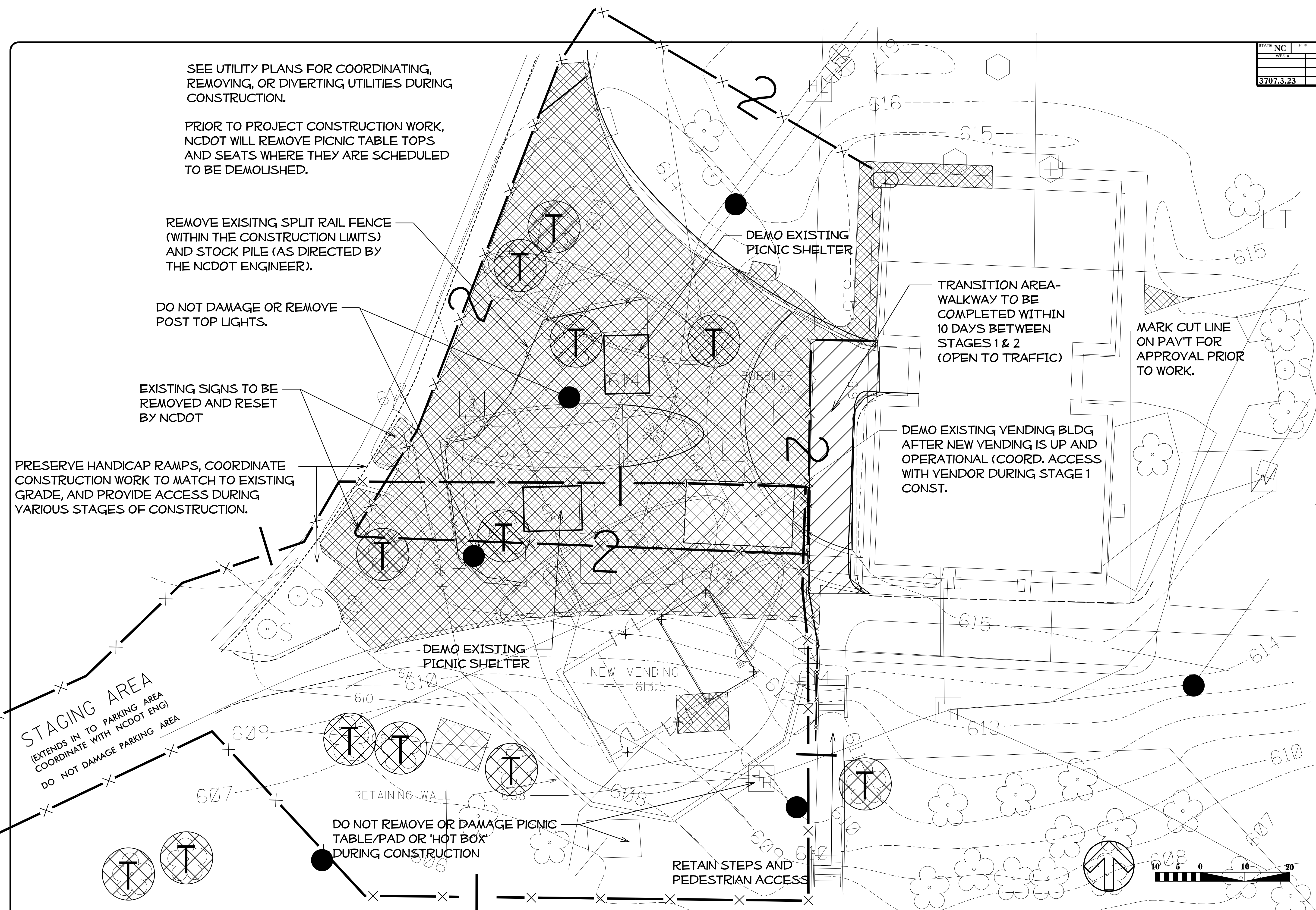
STATE NC	T.I.P. #	SHEET #
WBS #	P.A. Project #	Description
3707.3.23		P.E. RW CONST.

North Carolina Department of Transportation
Division of Highways
1 South Wilmington Street Raleigh, North Carolina



I-40
Alamance Co. Rest Areas

Plans Drawn By:	KOPETSKY
Scale	n/a
Date	3 / 5 / 15
Letting Date	
2012 Standard Specifications	
Sheet Description	SBL Demo & Staging Plan
Sheet #	I-03



SEE UTILITY PLANS FOR COORDINATING, REMOVING, OR DIVERTING UTILITIES DURING CONSTRUCTION.

PRIOR TO PROJECT CONSTRUCTION WORK, NCDOT WILL REMOVE PICNIC TABLE TOPS AND SEATS WHERE THEY ARE SCHEDULED TO BE DEMOLISHED.

REMOVE EXISTING SPLIT RAIL FENCE (WITHIN THE CONSTRUCTION LIMITS) AND STOCK PILE (AS DIRECTED BY THE NCDOT ENGINEER).

DO NOT DAMAGE OR REMOVE POST TOP LIGHTS.

EXISTING SIGNS TO BE REMOVED AND RESET BY NCDOT

PRESERVE HANDICAP RAMPS, COORDINATE CONSTRUCTION WORK TO MATCH TO EXISTING GRADE, AND PROVIDE ACCESS DURING VARIOUS STAGES OF CONSTRUCTION.

STAGING AREA
(EXTENDS IN TO PARKING AREA COORDINATE WITH NCDOT ENG)
DO NOT DAMAGE PARKING AREA

DEMO EXISTING PICNIC SHELTER

NEW VENDING
FFE-613.5

DEMO EXISTING PICNIC SHELTER

TRANSITION AREA-
WALKWAY TO BE
COMPLETED WITHIN
10 DAYS BETWEEN
STAGES 1 & 2
(OPEN TO TRAFFIC)

MARK CUT LINE
ON PAY'T FOR
APPROVAL PRIOR
TO WORK.

DEMO EXISTING VENDING BLDG
AFTER NEW VENDING IS UP AND
OPERATIONAL (COORD. ACCESS
WITH VENDOR DURING STAGE 1
CONST.

DO NOT REMOVE OR DAMAGE PICNIC
TABLE/PAD OR 'HOT BOX'
DURING CONSTRUCTION

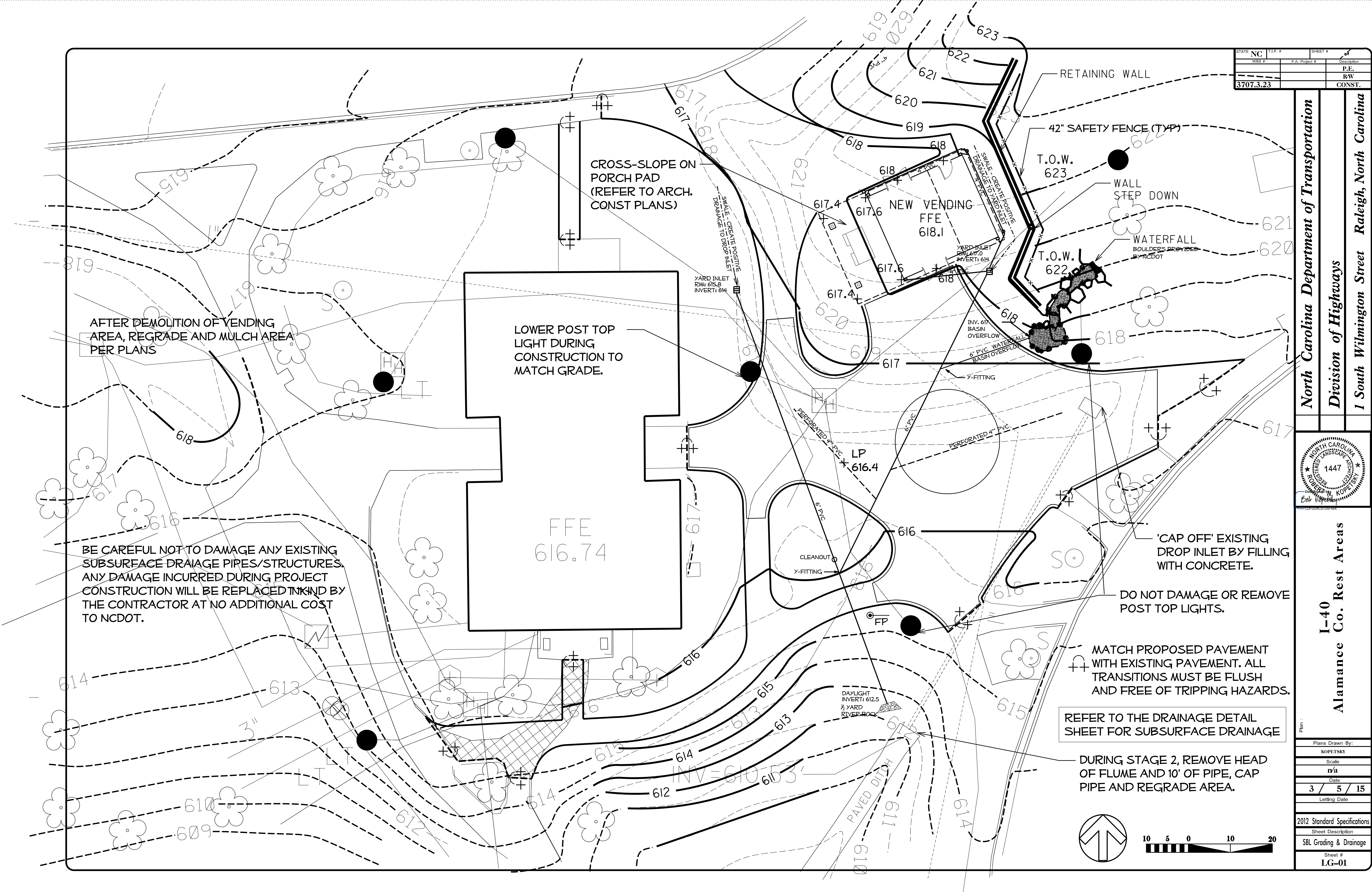
RETAIN STEPS AND
PEDESTRIAN ACCESS

STATE NC	T.I.P. #	SHEET #
WBS #	F.A. Project #	Description
3707.3.23		P.E. RW CONST.

North Carolina Department of Transportation
Division of Highways
1 South Wilmington Street Raleigh, North Carolina

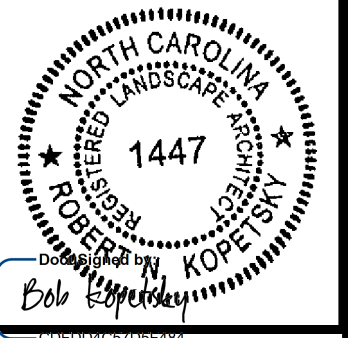
1447
NORTH CAROLINA
REGISTERED
PROFESSIONAL
ENGINEER
BOB M. KOPETSKY
EXPIRATION DATE 12/31/2024

Plan:
Plans Drawn By:
KOPETSKY
Scale:
n/a
Date:
3 / 5 / 15
Letting Date:
2012 Standard Specifications
Sheet Description
NBL Demo & Staging Plan
Sheet #
1-04



STATE NC	T.I.P. #	SHEET # of
WBS #	F.A. Project #	P.E.
3707.3.23		RW
		CONST.

North Carolina Department of Transportation
Division of Highways
1 South Wilmington Street Raleigh, North Carolina



I-40
Alamance Co. Rest Areas

Plans Drawn By:	KOPETSKY
Scale	n/a
Date	3 / 5 / 15
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2012 Standard Specifications
Sheet Description
SBL Grading & Drainage
Sheet #
LG-01

REGRADE INTERIOR OF SIDEWALK TO PROVIDE POSITIVE DRAINAGE (FOR WATER TO DISSIPATE IN ADJOINING TURF AREA).

MATCH PROPOSED PAVEMENT WITH EXISTING PAVEMENT. ALL TRANSITIONS MUST BE FLUSH AND FREE OF TRIPPING HAZARDS.

SEE UTILITY PLANS FOR COORDINATING, REMOVING, OR DIVERTING UTILITIES DURING CONSTRUCTION.

REFER TO THE DRAINAGE DETAIL SHEET FOR SUBSURFACE DRAINAGE

DO NOT DAMAGE OR REMOVE POST TOP LIGHTS.

PRESERVE HANDICAP RAMPS, COORDINATE CONSTRUCTION WORK TO MATCH TO EXISTING GRADE, AND PROVIDE ACCESS DURING VARIOUS STAGES OF CONSTRUCTION.

H/C RAMPS

OVERFLOW
INV: 613

CROSS-SLOPE ON PORCH PAD (REFER TO ARCH. CONST PLANS)

BE CAREFUL NOT TO DAMAGE ANY EXISTING SUBSURFACE DRAIAGE PIPES/STRUCTURES. ANY DAMAGE INCURRED DURING PROJECT CONSTRUCTION WILL BE REPLACED INKIND BY THE CONTRACTOR AT NO ADDITIONAL COST TO NCDOT.

STEP DOWN DRAIN PIPE ON BACK SIDE OF WALL AND BREACH AT SURFACE LEVEL

RETAINING WALL

42" SAFETY FENCE (TYP)

STATE NC	T.I.P. #	SHEET #
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North Carolina Department of Transportation

Division of Highways

1 South Wilmington Street Raleigh, North Carolina



I-40
Alamance Co. Rest Areas

Plans Drawn By:
KOPETSKY
Scale
n/a
Date
3 / 5 / 15
Letting Date

2012 Standard Specifications
Sheet Description
NBL Grading & Drainage
Sheet #
LG-02

STATE NC	T.I.P. #	SHEET #
WBS #	F.A. Project #	Description
		P.E.
		RW
3707.3.23		CONST.

NOTES

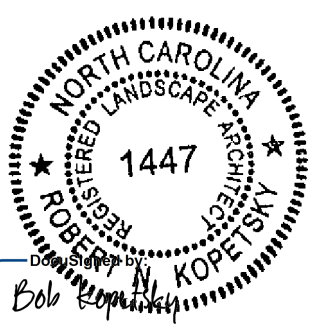
COORDINATE HARDSCAPE CONSTRUCTION WITH SITE AND BUILDING DEVELOPMENT

SIDEWALKS TO MATCH EXISTING WHERE NOTED

UNLESS OTHER WISE NOTED, SIDEWALK CROSS-SLOPES ARE 2%

SEE DETAILS FOR PLACEMENT OF FENCE ATOP RETAINING WALL

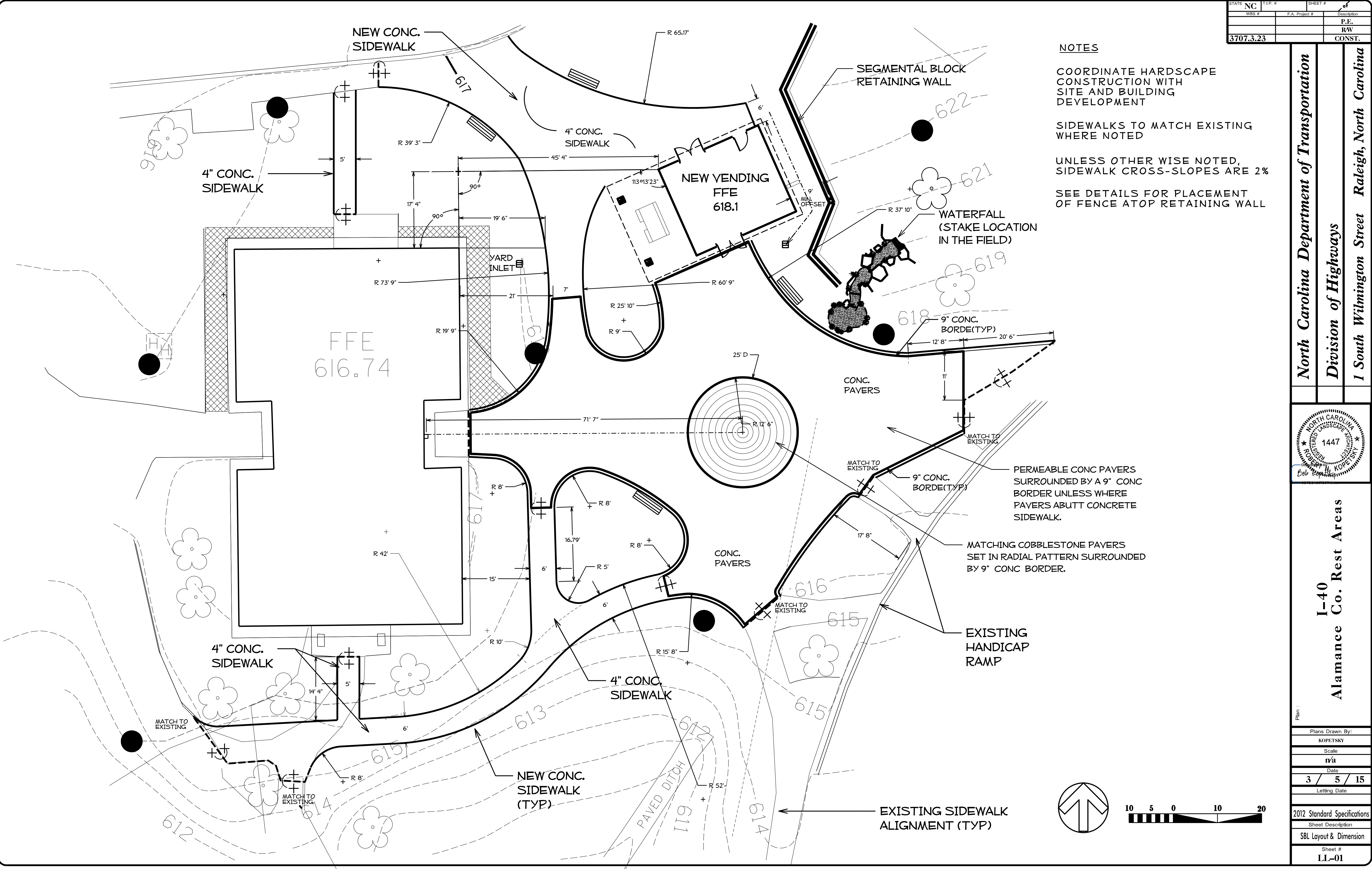
North Carolina Department of Transportation
Division of Highways
1 South Wilmington Street Raleigh, North Carolina



I-40
Alamance Co. Rest Areas

Plans Drawn By:
KOPETSKY
Scale
n/a
Date
3 / 5 / 15
Letting Date

2012 Standard Specifications
Sheet Description
SBL Layout & Dimension
Sheet #
LL-01



STATE NC	T.J.P. #	SHEET #
WBS #	P.A. Project #	Description
		P.E.
		RW
3707.3.23		CONST.

NOTES

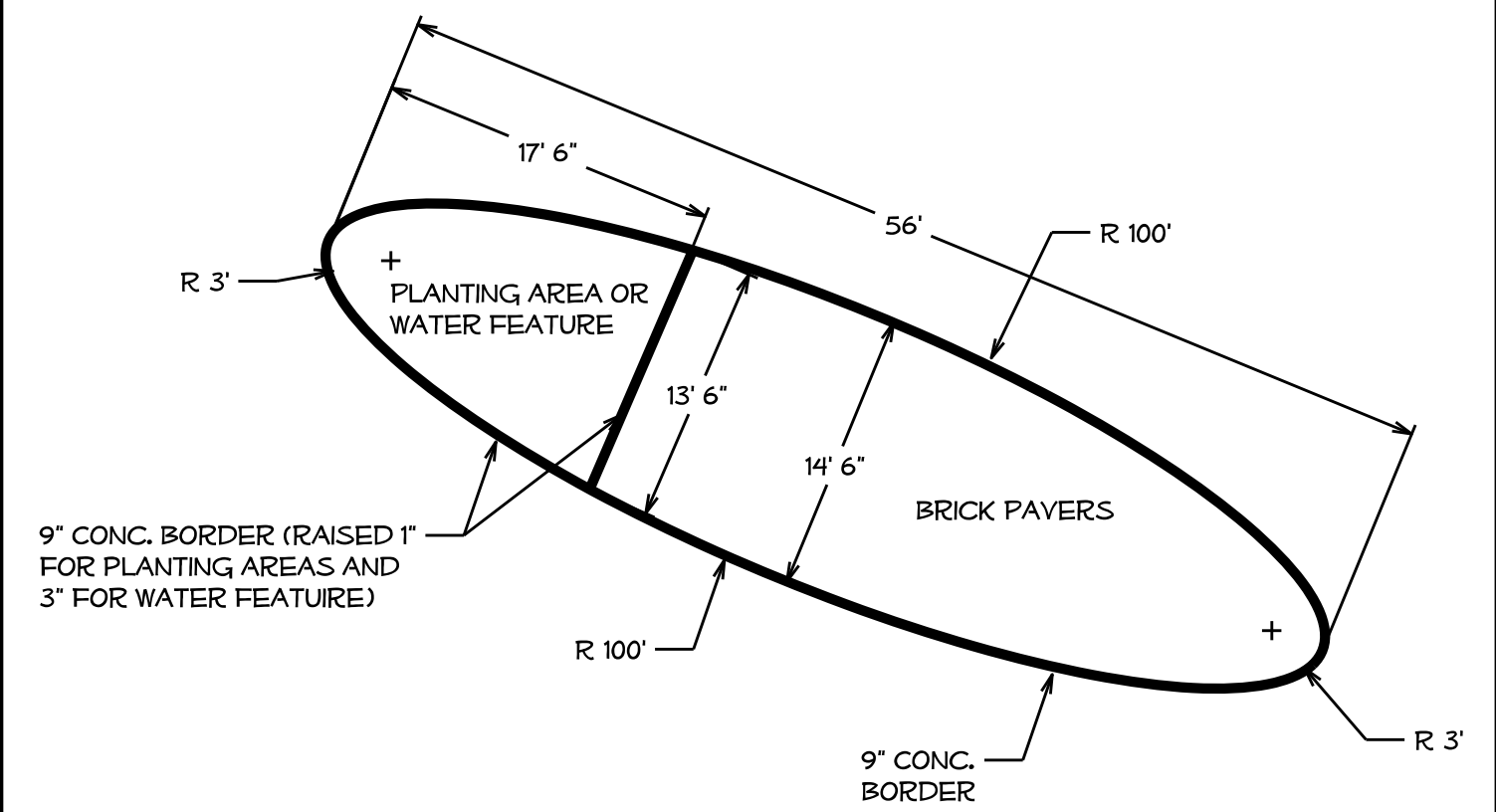
COORDINATE HARDSCAPE CONSTRUCTION WITH SITE AND BUILDING DEVELOPMENT; SOME FIELD ADJUSTMENTS MAY BE NEEDED DUE TO EXACT SITE CONDITIONS.

SIDEWALKS TO MATCH EXISTING WHERE NOTED

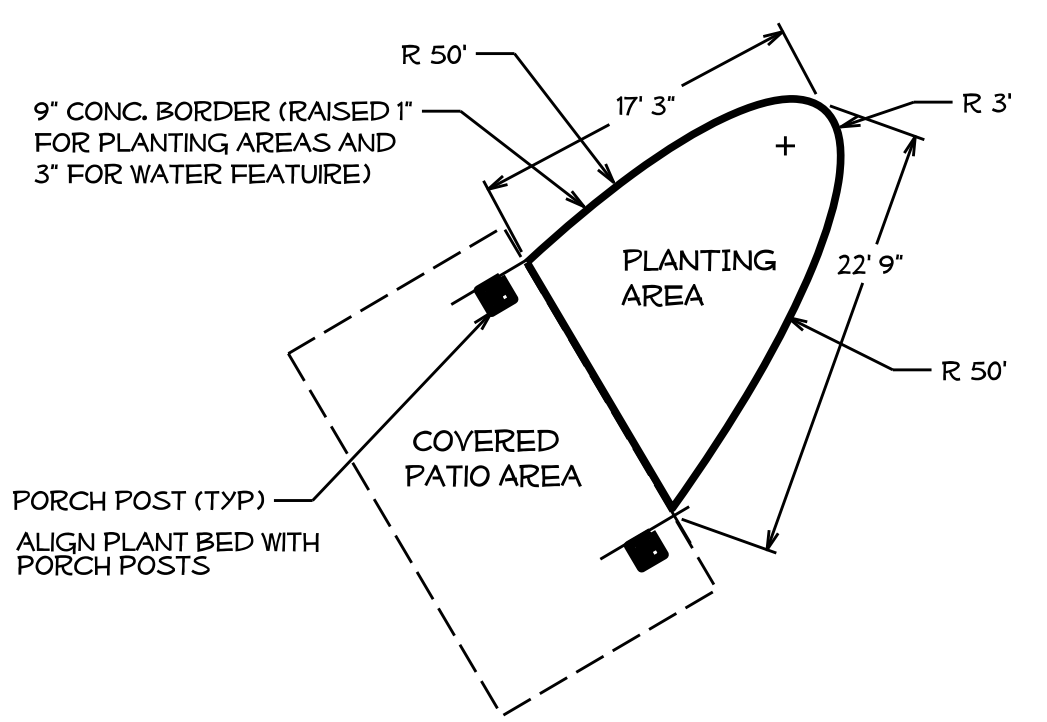
UNLESS OTHER WISE NOTED, SIDEWALK CROSS-SLOPES ARE 2%

SEE DETAILS FOR PLACEMENT OF FENCE ATOP RETAINING WALL

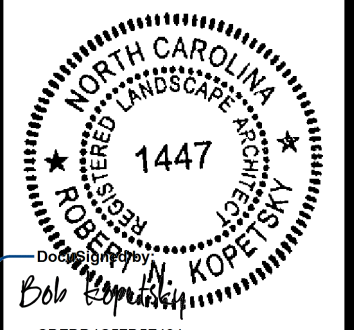
OVAL PAVER PATTERN LAYOUT



VENDING BED LAYOUT

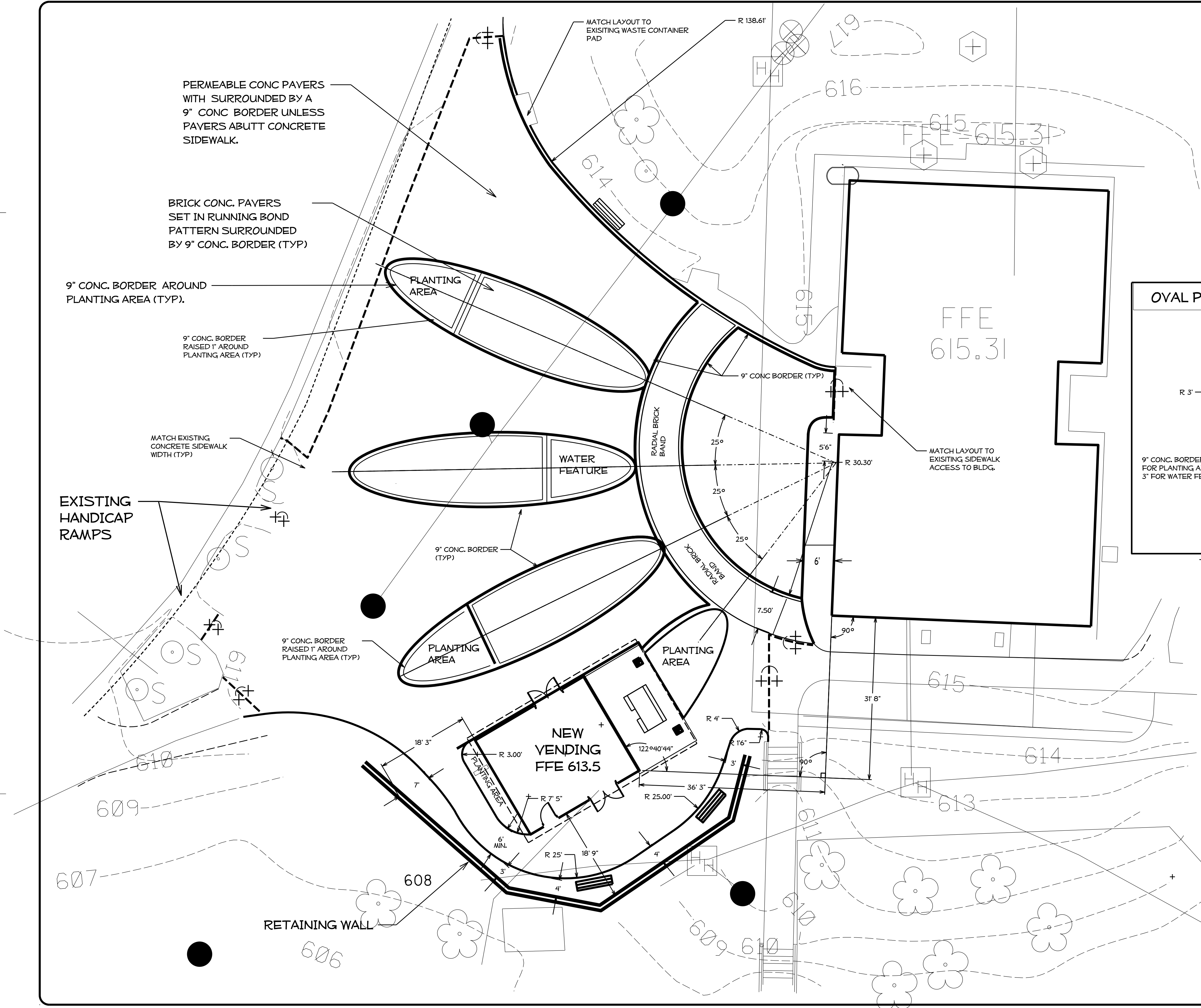
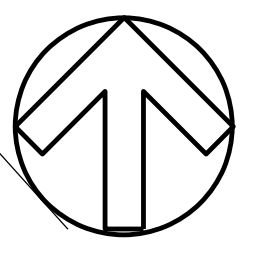


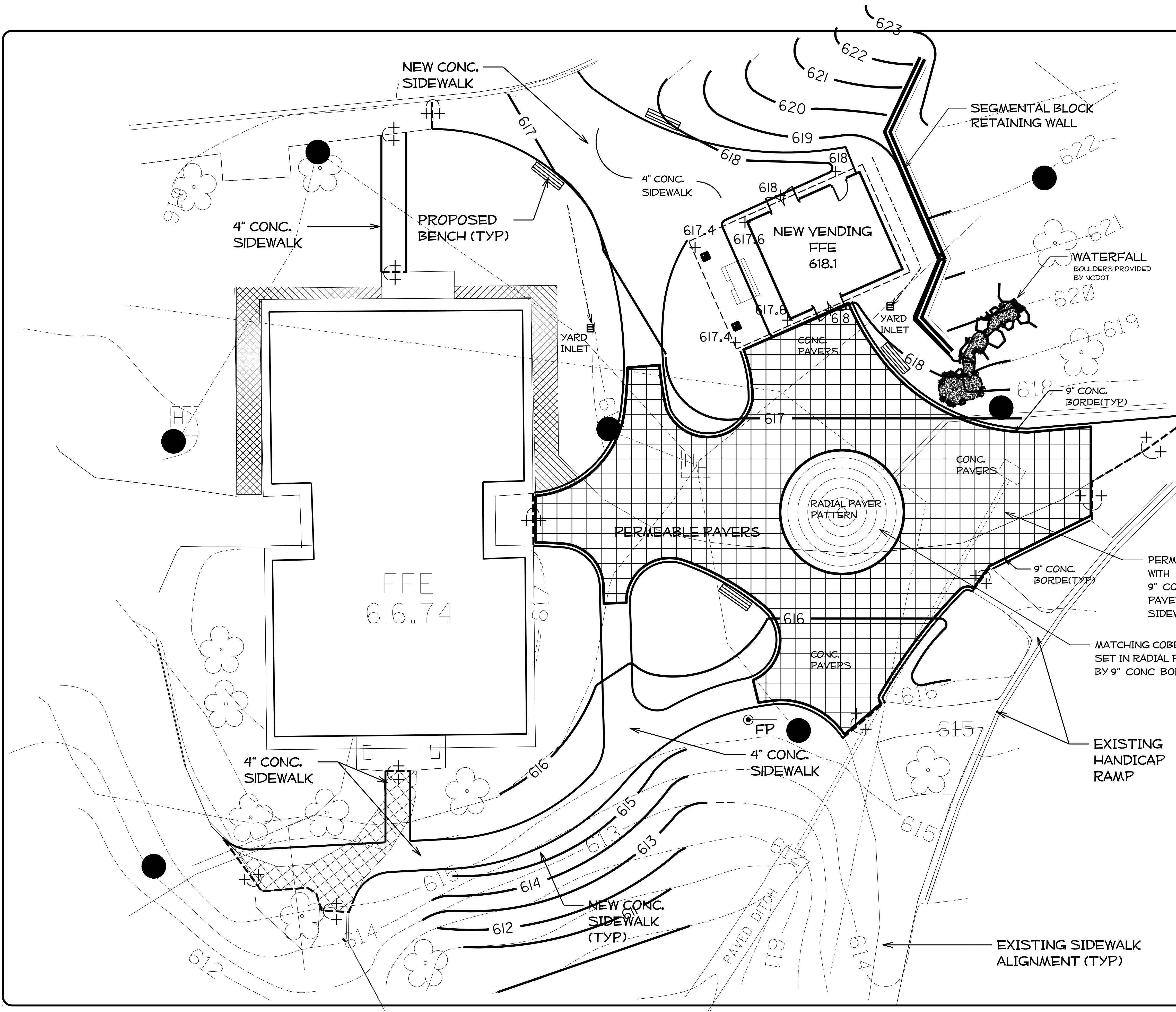
North Carolina Department of Transportation
Division of Highways
1 South Wilmington Street Raleigh, North Carolina



I-40
Alamance Co. Rest Areas

Plans Drawn By:	KOPETSKY
Scale	n/a
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2012 Standard Specifications	
Sheet Description	NBL Layout & Dimension
Sheet #	LL-02





NOTES

COORDINATE HARDSCAPE CONSTRUCTION WITH SITE AND BUILDING DEVELOPMENT

SIDEWALKS TO MATCH EXISTING WHERE NOTED

UNLESS OTHER WISE NOTED, SIDEWALK CROSS-SLOPES ARE 2%

SEE DETAILS FOR PLACEMENT OF FENCE ATOP RETAINING WALL

NO SIDEWALK SHALL EXCEED 5% SLOPE (ADA STANDARD)

NCDOT TO BE RESPONSIBLE FOR THE RELOCATION AND PLACEMENT OF WASTE AND RECYCLE CONTAINERS

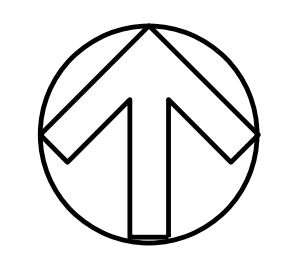
AT THE BEGINNING OF STAGE 2 CONSTRUCTION PAVERS AT FRONT DOOR SHALL BE COMPLETED, WITHIN 10 DAYS FOR ACCESS TO FRONT DOOR. PEDESTRIAN TRAFFIC WILL BE REROUTED DURING SHORT PERIOD OF TIME TO THE REAR ENTRANCE.

PERMEABLE CONC PAVERS WITH SURROUNDED BY A 9" CONC BORDER UNLESS PAVERS ABUT CONCRETE SIDEWALK.

MATCHING COBBLESTONE PAVERS SET IN RADIAL PATTERN SURROUNDED BY 9" CONC BORDER.

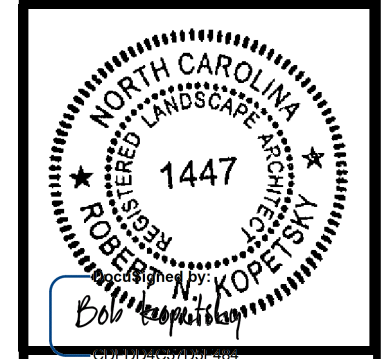
EXISTING HANDICAP RAMP

EXISTING SIDEWALK ALIGNMENT (TYP)



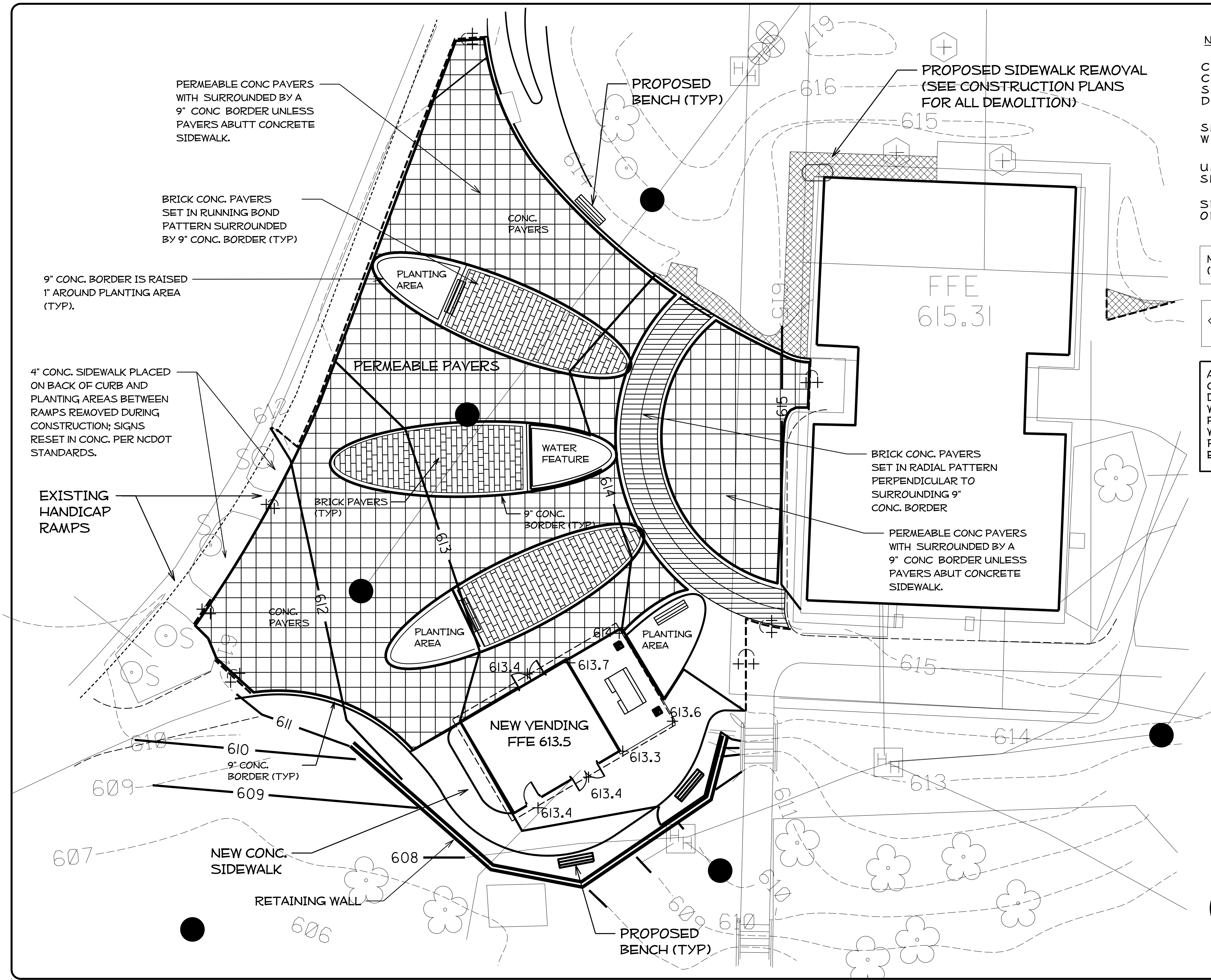
STATE NC	T.J.P. #	SHEET # of
WBS #	F.A. Project #	Description
		P.E.
		RW
3707.3.23		CONST.

North Carolina Department of Transportation
Division of Highways
1 South Wilmington Street Raleigh, North Carolina



I-40
Alamance Co. Rest Areas

Plans Drawn By:	KOPETSKY
Scale	n/a
Date	3 / 5 / 15
Letting Date	
2012 Standard Specifications	
Sheet Description	SBL Hardscape Plan
Sheet #	LH-01



NOTES

COORDINATE HARDSCAPE CONSTRUCTION WITH SITE AND BUILDING DEVELOPMENT

SIDEWALKS TO MATCH EXISTING WHERE NOTED

UNLESS OTHER WISE NOTED, SIDEWALK CROSS-SLOPES ARE 2%

SEE DETAILS FOR PLACEMENT OF FENCE ATOP RETAINING WALL

NO SIDEWALK SHALL EXCEED 5% SLOPE (ADA STANDARD)

NCDOT TO BE RESPONSIBLE FOR THE RELOCATION AND PLACEMENT OF WASTE AND RECYCLE CONTAINERS

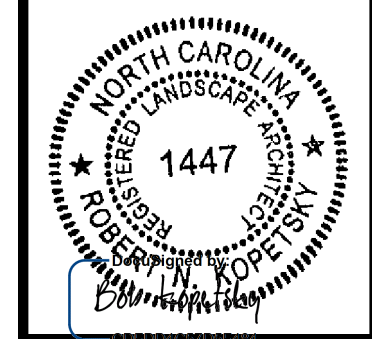
AT THE BEGINNING OF STAGE 2 CONSTRUCTION PAVERS AT FRONT DOOR SHALL BE COMPLETED, WITHIN 10 DAYS FOR ACCESS TO FRONT DOOR. PEDESTRIAN TRAFFIC WILL BE REROUTED DURING SHORT PERIOD OF TIME TO THE REAR ENTRANCE.

STATE NC	T.J.P. #	SHEET #
WBS #	F.A. Project #	Description
		P.E.
		RW
3707.3.23		CONST.

North Carolina Department of Transportation

Division of Highways

1 South Wilmington Street Raleigh, North Carolina

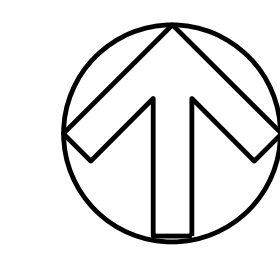


I-40

Alamance Co. Rest Areas

Plans Drawn By:	KOPETSKY
Scale	n/a
Date	3 / 5 / 15
Letting Date	

2012 Standard Specifications
Sheet Description
NBL Hardscape Plan
Sheet #
LH-02



TRUCK PARKING

16-PS
(3 GROUPS TO BE STAKED
IN FIELD FOR ENG APPROVAL)

45-HO (2' O.C.)

617

4-MC

4-NG

5-NG

6-PS

69-LB

SOD

10-JE

9-AA

JS

2-LC

JS

4-IC

4-CS

3-DO

25-LB

6-EK

6-RG

3-JE

3-CS

10-CH

45-LB

JS

CC

7-AA

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ALL PLANTING AREAS TO RECEIVE
4" OF PINE BARK MULCH.

ALL BOULDERS SUPPLIED BY NCDOT
AND WILL BE DELIVERED TO THE SITE.

DO NOT DAMAGED EXISTING LANDSCAPE
PLANTINGS.

SEE DETAILS FOR PLACEMENT
OF FENCE ATOP RETAINING WALL

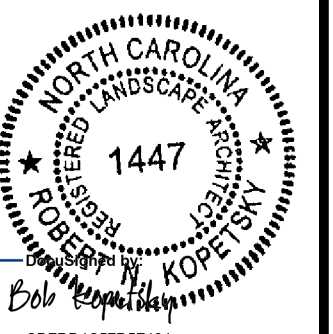
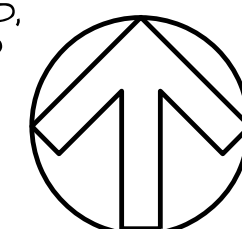
ALL PLANTINGS TO HAVE A DEFINED
PLANT BED EDGE PER DETAILS.

WHERE NEW SOD AREAS CONNECT
TO EXISTING TURF, CREATE CLEAN
TRANSITION.

DO NOT ALLOW SOIL, MULCH,
OR ANY OTHER MATERIALS
TO BE DEPOSITED ON
PERMEABLE PAYEMENT.
IF THE ENGINEER FINDS
PERMEABLE PAYER AREAS
DEFILED BY CONTRACTOR
CONSTRUCTION WORK, PAYER
AND SUB-BASE MUST BE
REMOVED, CLEANED AND
REPLACED.

ADD 4" OF TOPSOIL FOR ALL NEW PLANT BEDS; ADD 2" TO SOD & RENOVATED TURF AREAS AND ADD 2" FOR RENOVATED PLANT BEDS.

KEY	BOTANICAL NAME	COMMON NAME
Trees		
AS	<i>Acer palmatum 'Sango Kaku'</i>	Sango Kaku Japanese Maple
CC	<i>Cercis canadensis 'Royal White'</i>	Royal White Redbud
CF	<i>Cornus florida 'Cherokee Chief'</i>	Cherokee Chief Flowering Dogwood
IN	<i>Ilex x 'Nellie R Stevens'</i>	Nellie R Stevens Holly
PK	<i>Prunus serrulata 'Kwanzan'</i>	Kwanzan Cherry
QS	<i>Quercus shumardii</i>	Shumard Oak
Shrubs		
AA	<i>Azalea x 'Robbie'</i>	Autumn Carnation (Encore)
AD	<i>Abelia graminifolia 'Rose Creek'</i>	Rose Creek Abelia
CD	<i>Caryopteris x clandonensis 'Dark Knight'</i>	Dark Knight Bluebeard
CH	<i>Cephalotaxa harringtonia 'Prostrata'</i>	Spreading Japanese Yew
CS	<i>Camellia x 'Winter's Charm'</i>	Winter's Charm Hardy Camellia
DO	<i>Daphne odora 'Aureo-marginata'</i>	Variegated Winter Daphne
IC	<i>Ilex crenata 'Compacta'</i>	Compact Japanese Holly
JC	<i>Juniperus procumbens 'Nana'</i>	Dwarf Japanese Garden Juniper
JS	<i>Juniperus chinensis 'Spartan'</i>	Spartan Juniper
LC	<i>Loropetalum chinense 'Blush'</i>	Blush Loropetalum
NG	<i>Nandina domestica 'Gulf Stream'</i>	Gulf Stream Nandina
RR	<i>Rosa x 'Radco'</i>	Double Knockout Red Rose
Grasses		
JE	<i>Juncus effusus</i>	Soft Rush
LB	<i>Liriope muscari 'Big Blue'</i>	Big Blue Liriope
LV	<i>Liriope muscari 'Variegata'</i>	Variegated Liriope
MC	<i>Muhlenbergia capillaris</i>	Pink Muhly Grass
OJ	<i>Ophiopogon japonicus</i>	Mondo Grass
PS	<i>Panicum virgatum 'Squaw'</i>	Squaw Switch Grass
Perennials		
DC	<i>Delosperma cooperi</i>	Hardy Ice Plant
EX	<i>Echinacea purpurea 'Kim's Knee High'</i>	Kim's Knee High Coneflower
HO	<i>Hemerocallis 'Orange Crush'</i>	Orange Crush Daylily
RG	<i>Rudbeckia fulgida 'Goldsturm'</i>	Goldsturm Black-eyed Susan
SA	<i>Sedum spectabile 'Autumn Joy'</i>	Autumn Joy Sedum
WS	<i>Echinacea purpurea 'White Swan'</i>	White Swan Coneflower



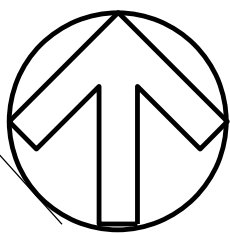
NOTES

ALL PLANTING AREAS TO RECEIVE 4" OF PINE BARK MULCH.
ALL BOULDERS SUPPLIED BY NCDOT AND WILL BE DELIVERED TO THE SITE.
DO NOT DAMAGED EXISTING LANDSCAPE PLANTINGS.
SEE DETAILS FOR PLACEMENT OF FENCE ATOP RETAINING WALL
ALL PLANTINGS TO HAVE A DEFINED PLANT BED EDGE PER DETAILS.
WHERE NEW SOD AREAS CONNECT TO EXISTING TURF, CREATE CLEAN TRANSITION.

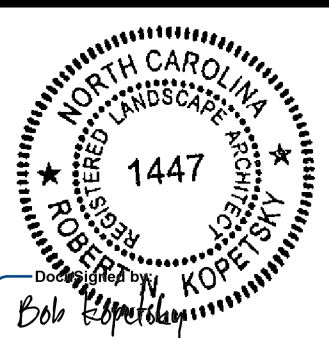
DO NOT ALLOW SOIL, MULCH, OR ANY OTHER MATERIALS TO BE DEPOSITED ON PERMEABLE PAYEMENT. IF THE ENGINEER FINDS PERMEABLE PAYER AREAS DEFILED BY CONTRACTOR CONSTRUCTION WORK, PAYER AND SUB-BASE MUST BE REMOVED, CLEANED AND REPLACED.

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QS	<i>Quercus shumardii</i>	Shumard Oak
Shrubs		
AA	<i>Azalea x 'Roblec'</i>	Autumn Carnation (Encore) Azalea
AD	<i>Abelia grandiflora</i> 'Rose Creek'	Rose Creek Abelia
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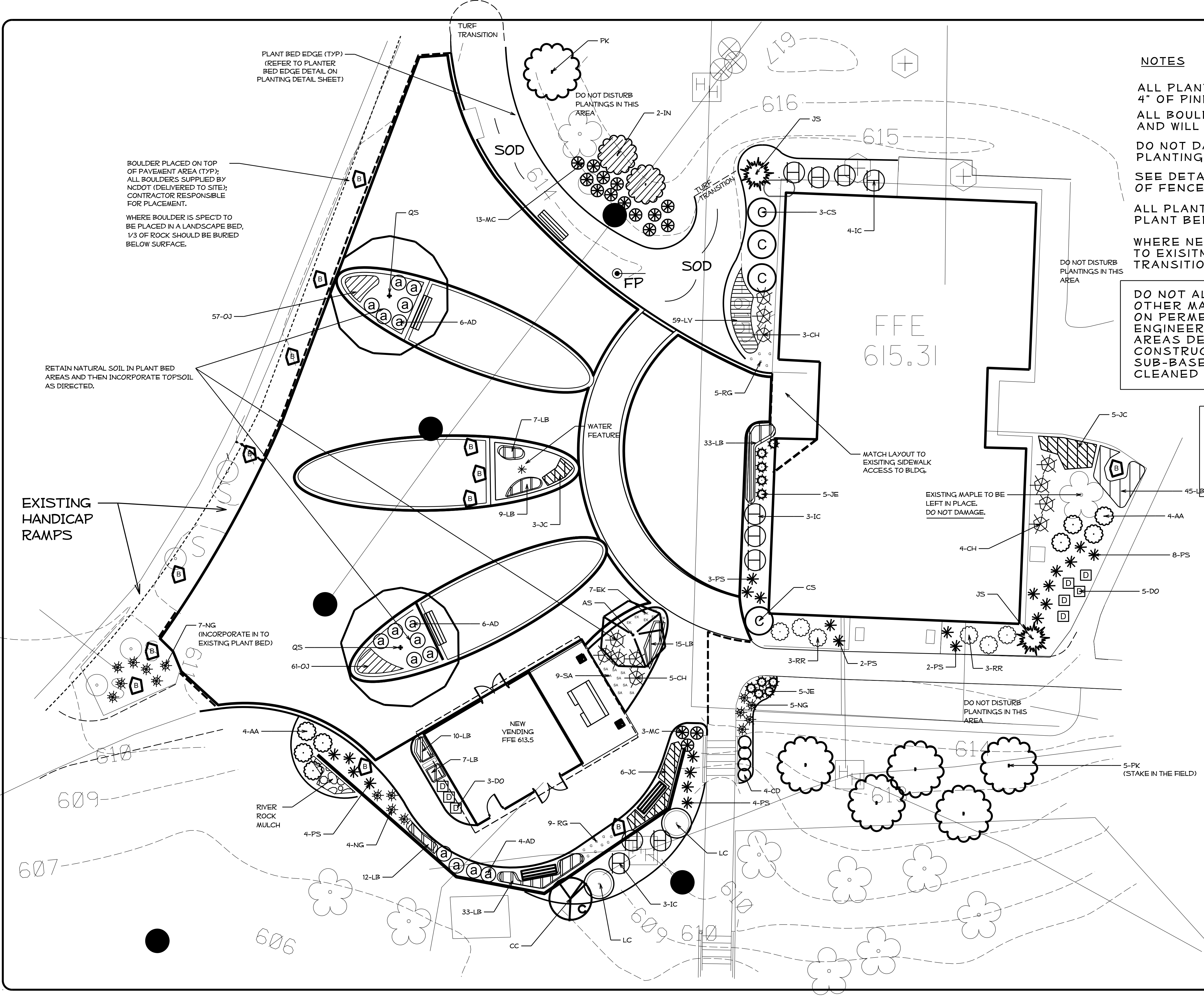


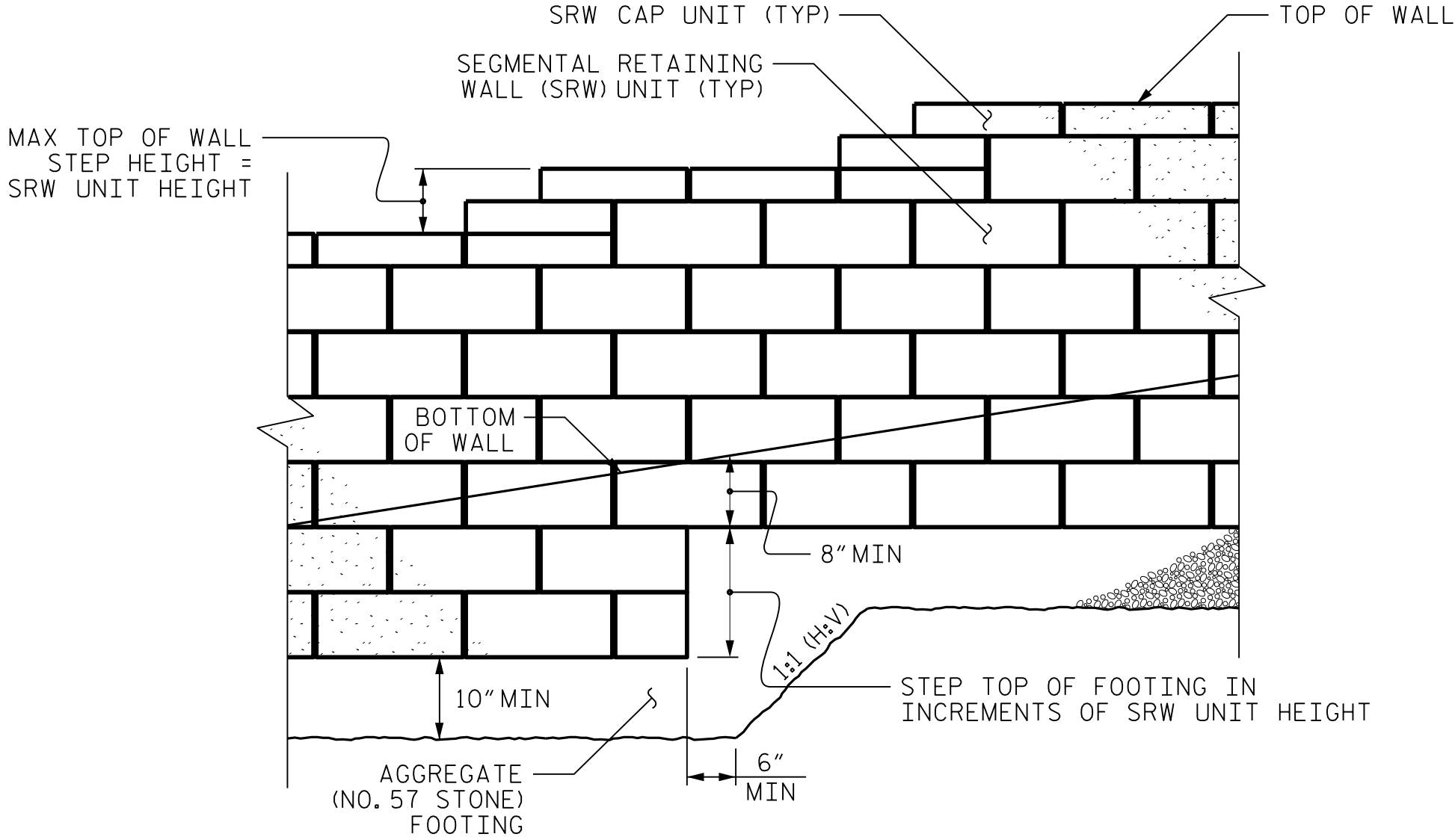
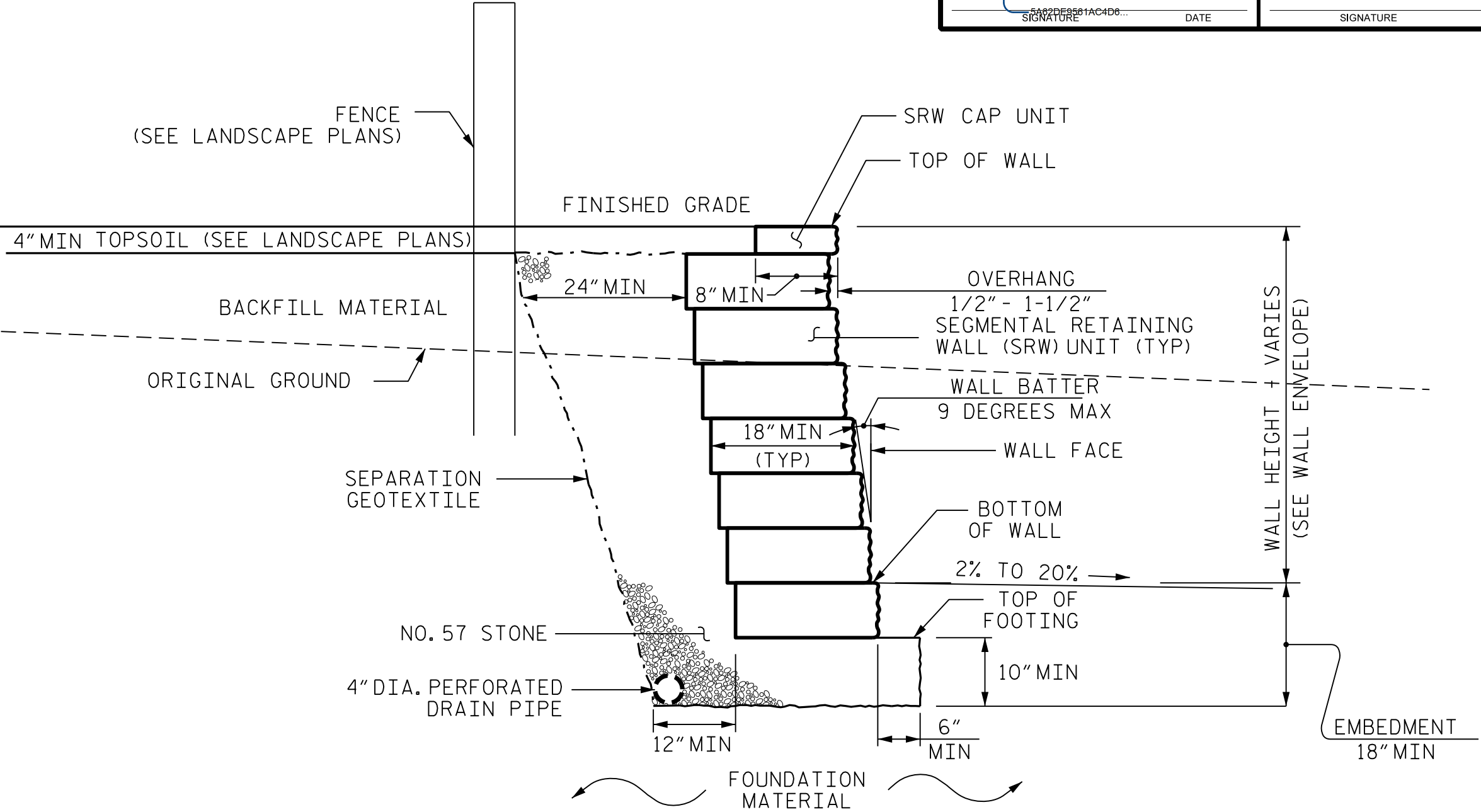
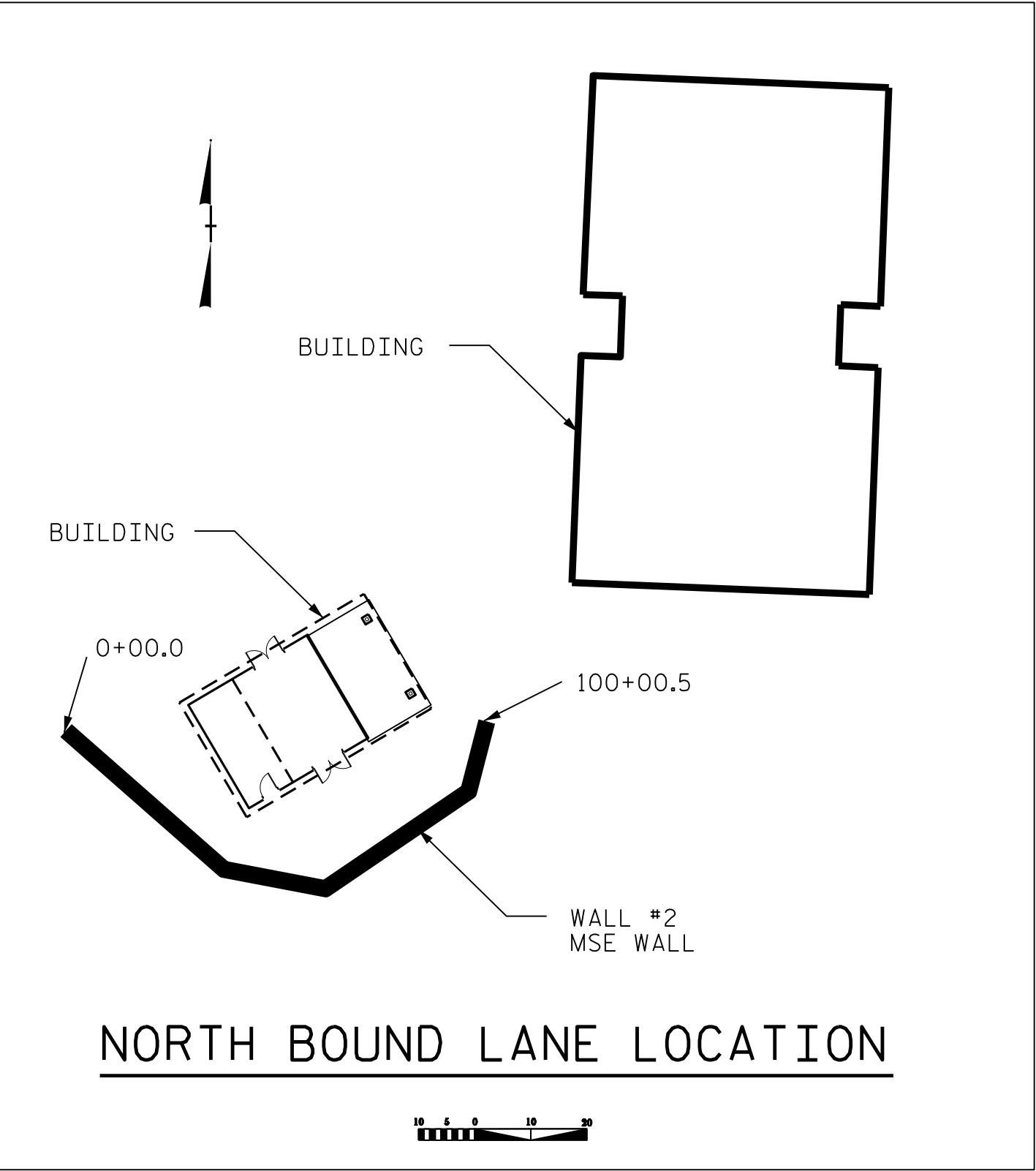
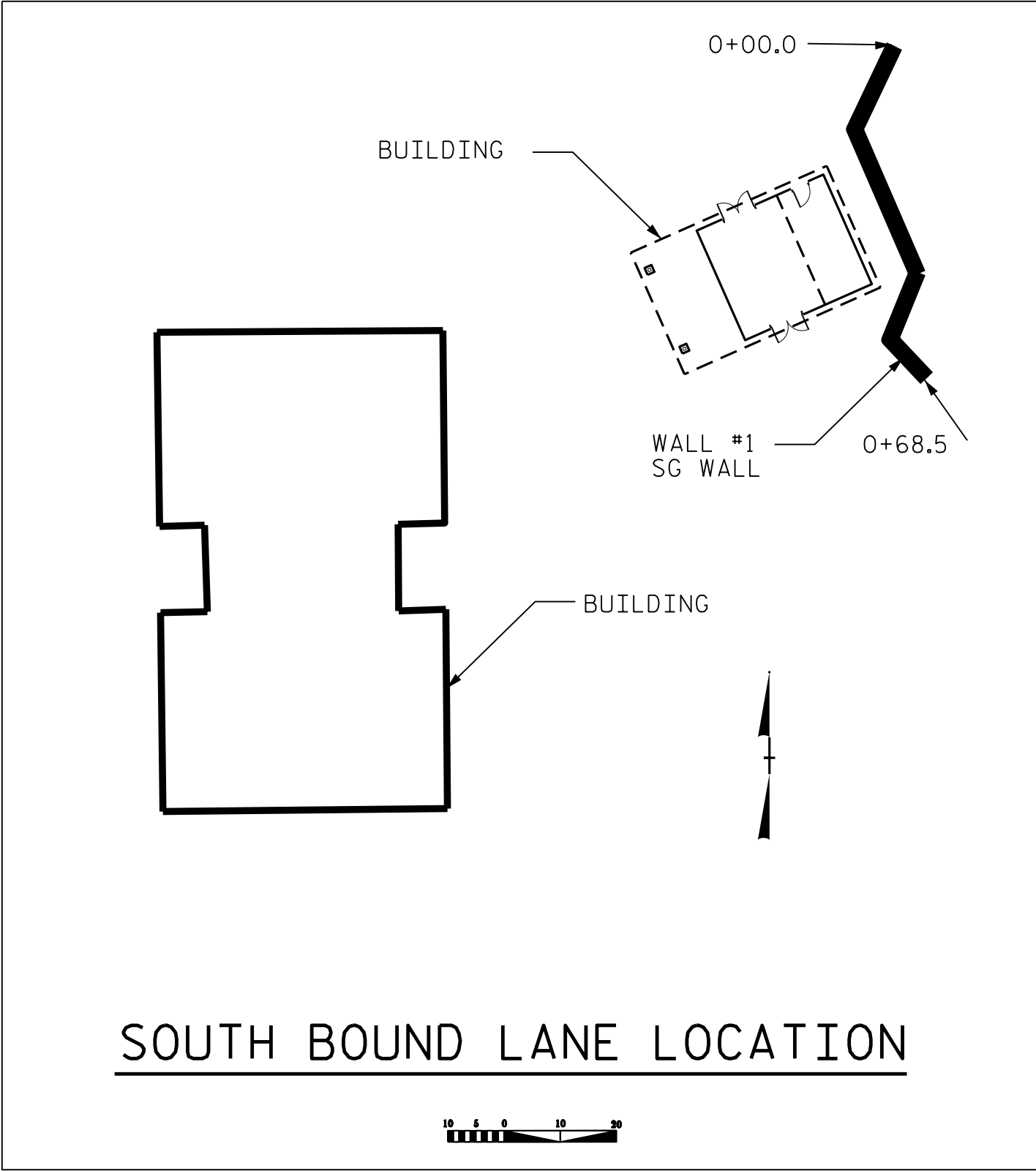
North Carolina Department of Transportation
Division of Highways
1 South Wilmington Street Raleigh, North Carolina



Plan:
I-40
Alamance Co. Rest Areas

Plans Drawn By:
KOFETSKY
Scale
n/a
Date
3 / 5 / 15
Letting Date
2012 Standard Specifications
Sheet Description
NBL Planting Plan
Sheet #
LP-02



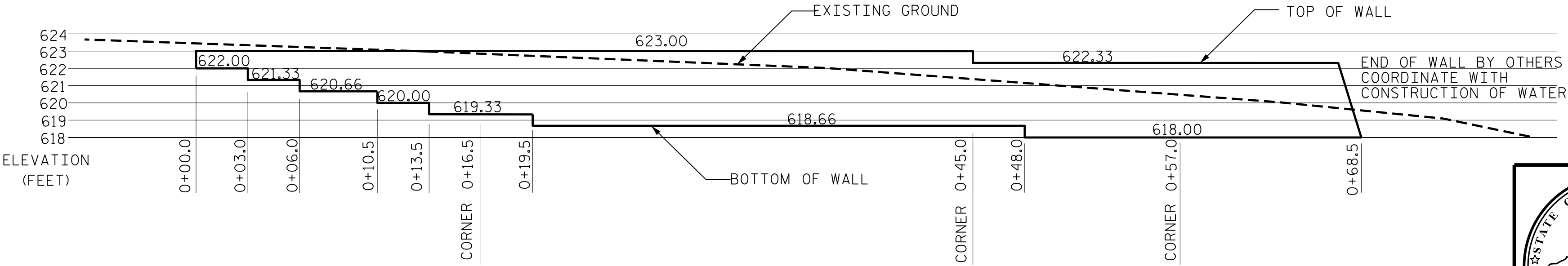


NOTES:

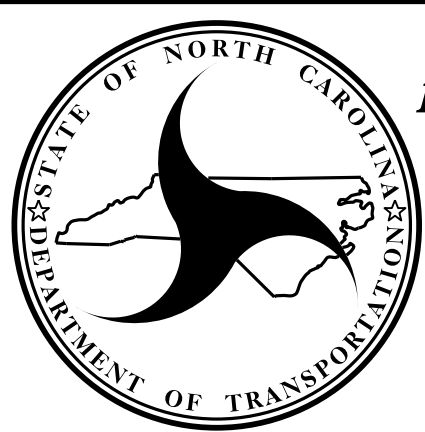
FOR SEGMENTAL GRAVITY RETAINING WALLS, SEE SEGMENTAL GRAVITY RETAINING WALLS PROVISION.

DO NOT PLACE NO. 57 STONE FOR FOOTINGS FOR RETAINING WALL NO. 1 UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

USE SRW UNITS WITH A EARTH TONE GRAY COLOR FOR RETAINING WALL NO. 1.



ESTIMATED SEGMENTAL GRAVITY WALL QUANTITY	
RETAINING WALL NO.	WALL AREA (SQUARE FEET)
1	300



REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

NOTES:

FOR MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALLS, SEE MECHANICALLY STABILIZED EARTH RETAINING WALLS PROVISION.

USE AN MSE WALL SYSTEM WITH SEGMENTAL RETAINING WALL UNITS (SRW) UNITS THAT MEET ARTICLE 1040-4 OF THE STANDARD SPECIFICATIONS FOR RETAINING WALL NO.2.

AT THE CONTRACTOR'S OPTION, USE FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALL NO.2.

USE SRW UNITS WITH A EARTH TONE GRAY FOR RETAINING WALL NO.2.

A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALL NO.2.

BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALL NO.2, SURVEY WALL LOCATION AND SUBMIT A REVISED WALL PROFILE VIEW (WALL ENVELOPE) FOR REVIEW. DO NOT START WALL DESIGN OR CONSTRUCTION UNTIL THE REVISED WALL ENVELOPE IS ACCEPTED.

DESIGN RETAINING WALL NO.2 FOR THE FOLLOWING:

- 1) H = DESIGN HEIGHT + EMBEDMENT
- 2) DESIGN LIFE = 75 YEARS
- 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 1500 LB/SF
- 4) MINIMUM REINFORCEMENT LENGTH (L) = 6 FT
- 5) REINFORCED ZONE AGGREGATE PARAMETERS:

AGGREGATE TYPE*	UNIT WEIGHT (γ) LB/CF	FRICTION ANGLE (ϕ) DEGREES	COHESION (c) LB/SF
COARSE	110	38	0
FINE	115	34	0
*SEE MSE RETAINING WALLS PROVISION FOR COARSE AND FINE AGGREGATE MATERIAL REQUIREMENTS.			

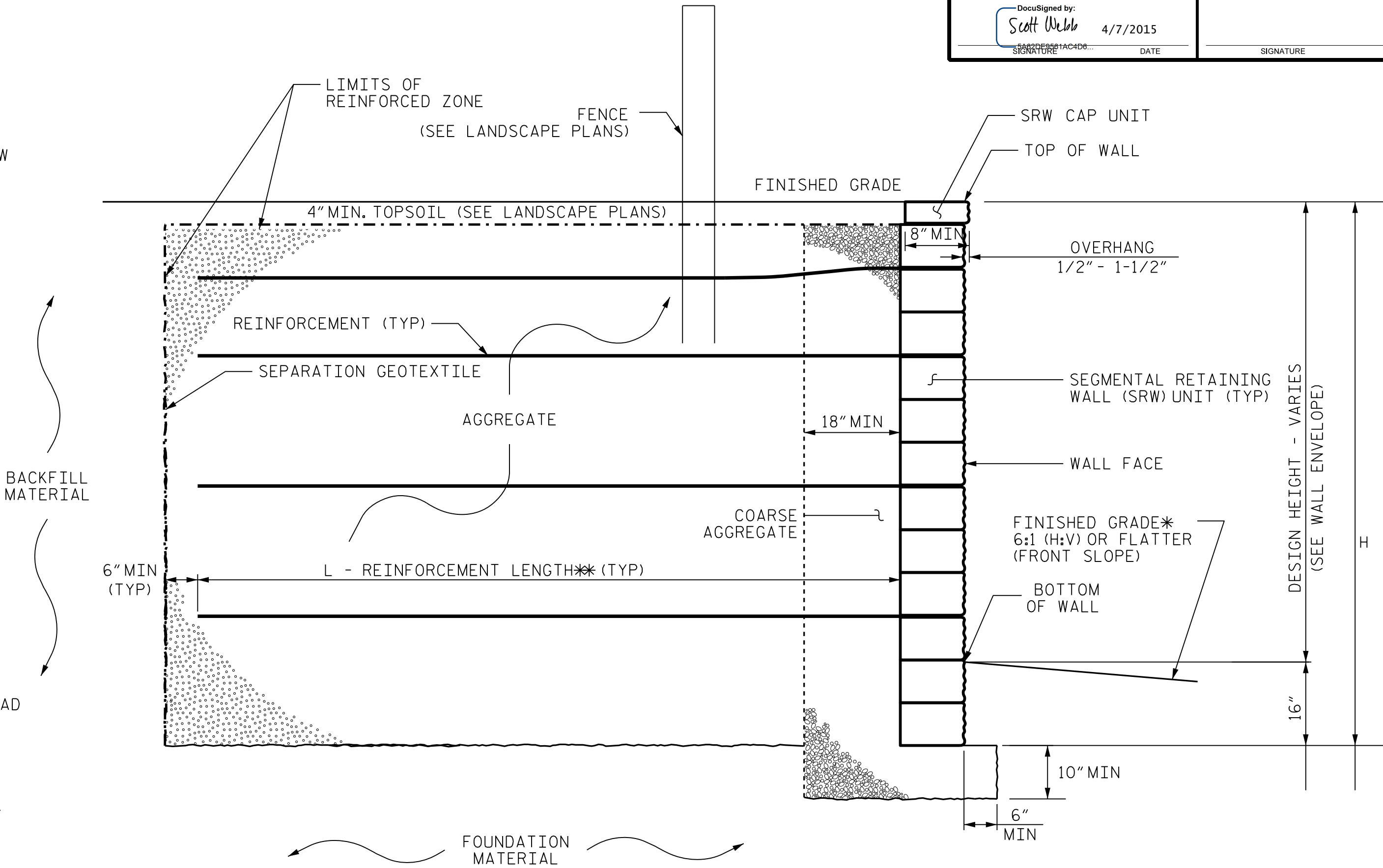
7) IN-SITU ASSUMED MATERIAL PARAMETERS:

MATERIAL TYPE	UNIT WEIGHT (γ) LB/CF	FRICTION ANGLE (ϕ) DEGREES	COHESION (c) LB/SF
BACKFILL	120	29	0
FOUNDATION	120	29	0

DESIGN RETAINING WALL NO.2 FOR A 100 PSF LIVE LOAD SURCHARGE STARTING 2 FEET FROM THE WALL FACE AND A 50 PSF DEAD LOAD SURCHARGE STARTING 10 FEET FROM THE WALL FACE.

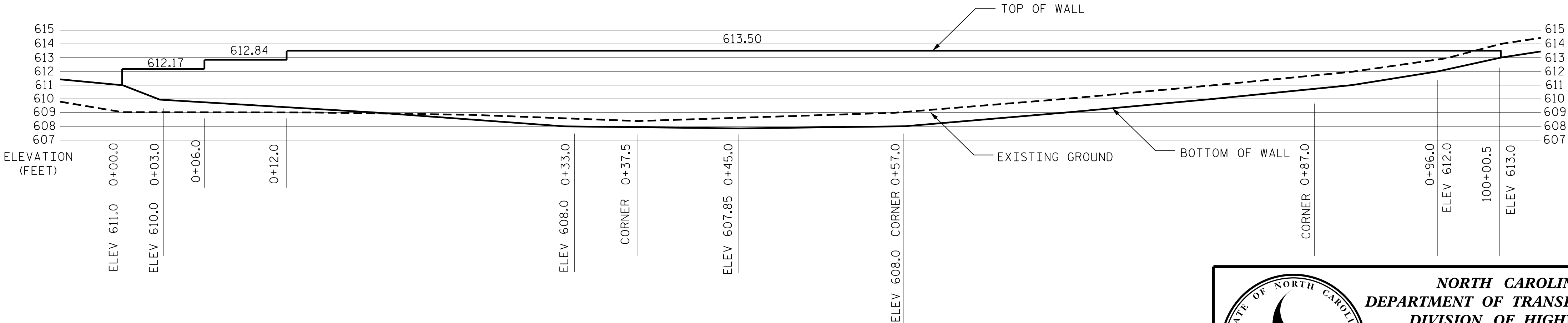
EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALL NO.2.

DO NOT PLACE AGGREGATE OR REINFORCEMENT FOR RETAINING WALL NO.2 UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.



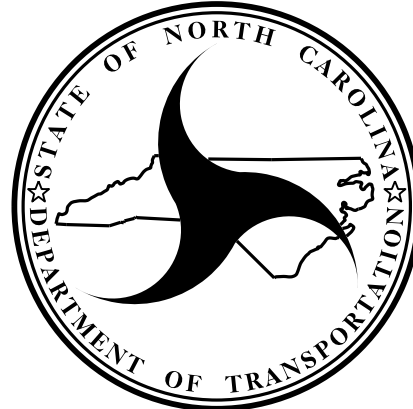
MSE WALL WITH SRW UNITS (WALL #2)- TYPICAL SECTION

*SEE LANDSCAPE PLANS FOR FINISHED GRADE DETAILS.
*SEE MSE RETAINING WALLS PROVISION AND MSE WALL NOTES FOR REINFORCEMENT LENGTH REQUIREMENTS.



ESTIMATED MSE WALL QUANTITY

RETAINING WALL NO.	WALL AREA (SQUARE FEET)
1	550



NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

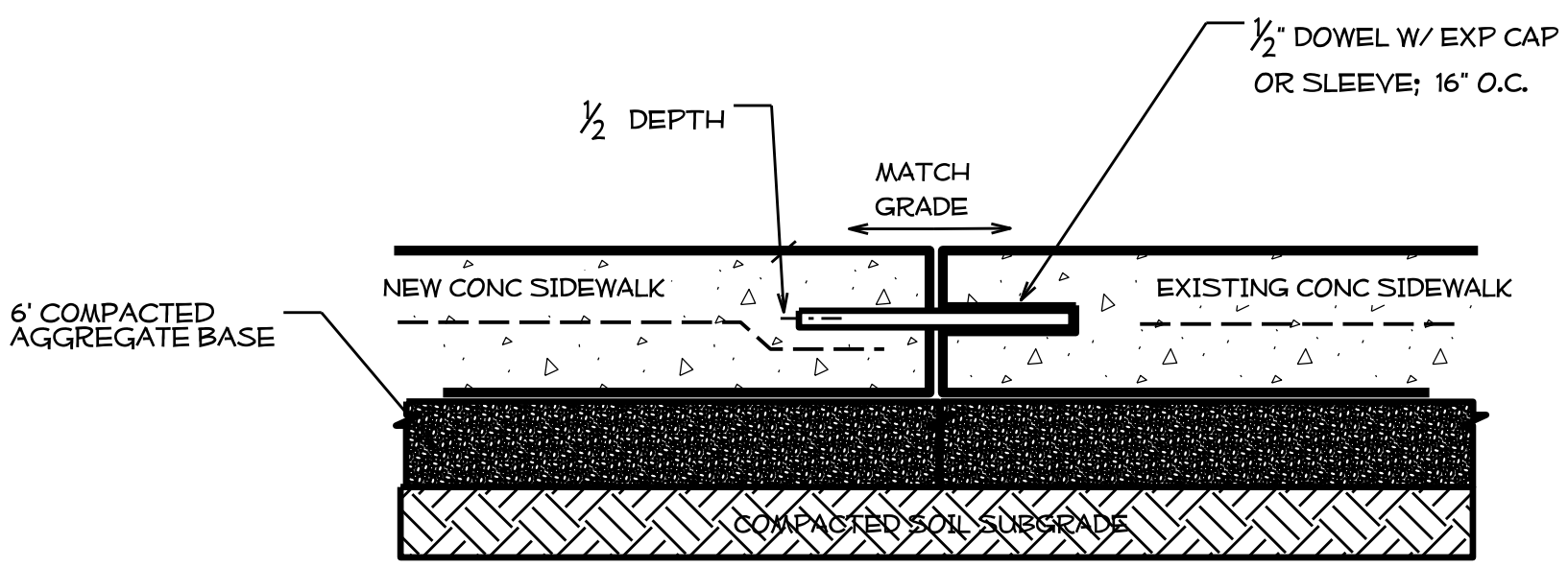
GEOTECHNICAL
ENGINEERING UNIT

MSE RETAINING WALL

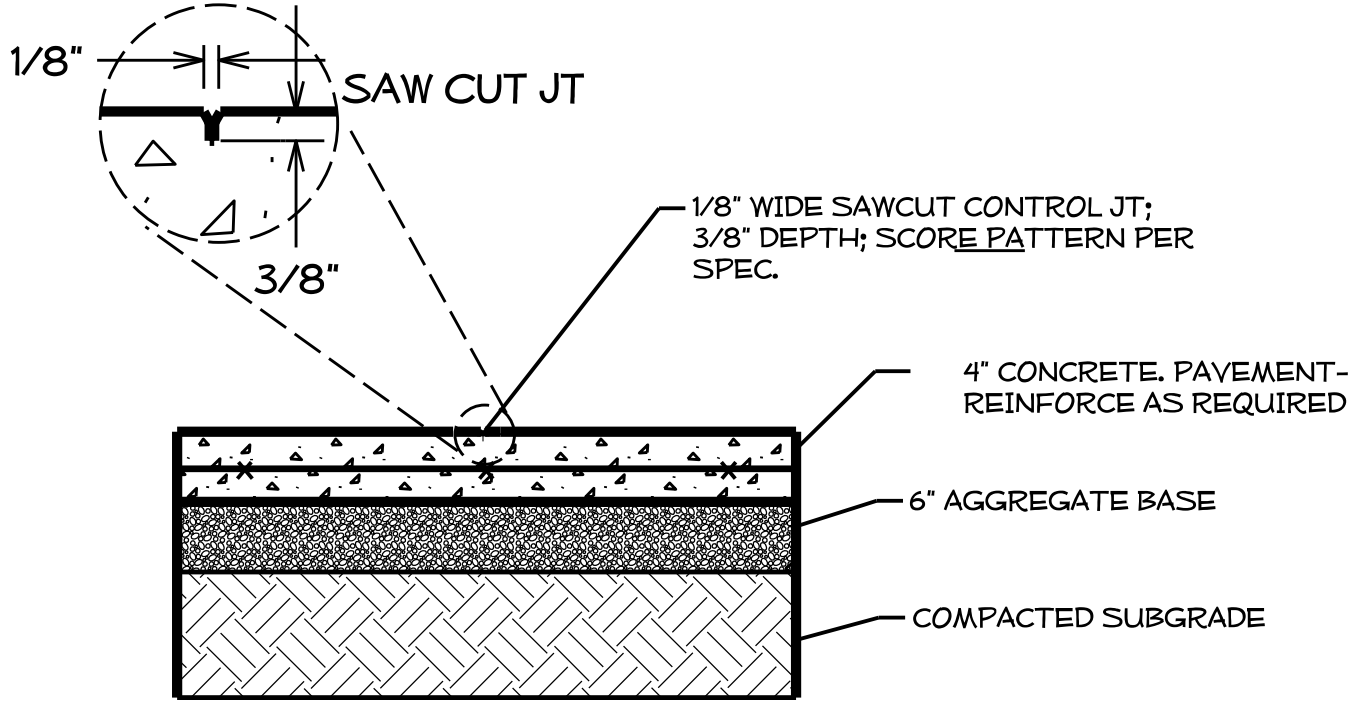
REVISIONS

NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

PREPARED BY: RSW	DATE: 3/30/2015
REVIEWED BY:	DATE:



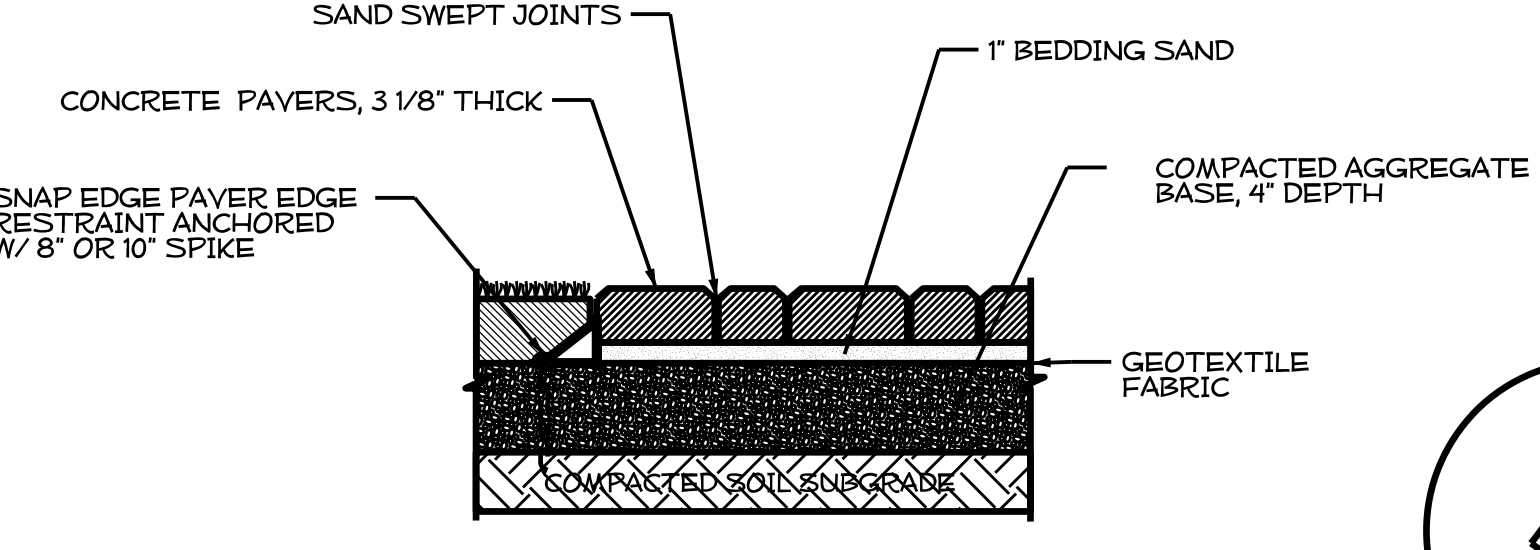
MATCHING NEW CONC SIDEWALK TO EXISTING
FOR ALL LOCATIONS WHERE EXISTING SIDEWALK ADJOINS NEW CONC - CONSULT ENGINEER -



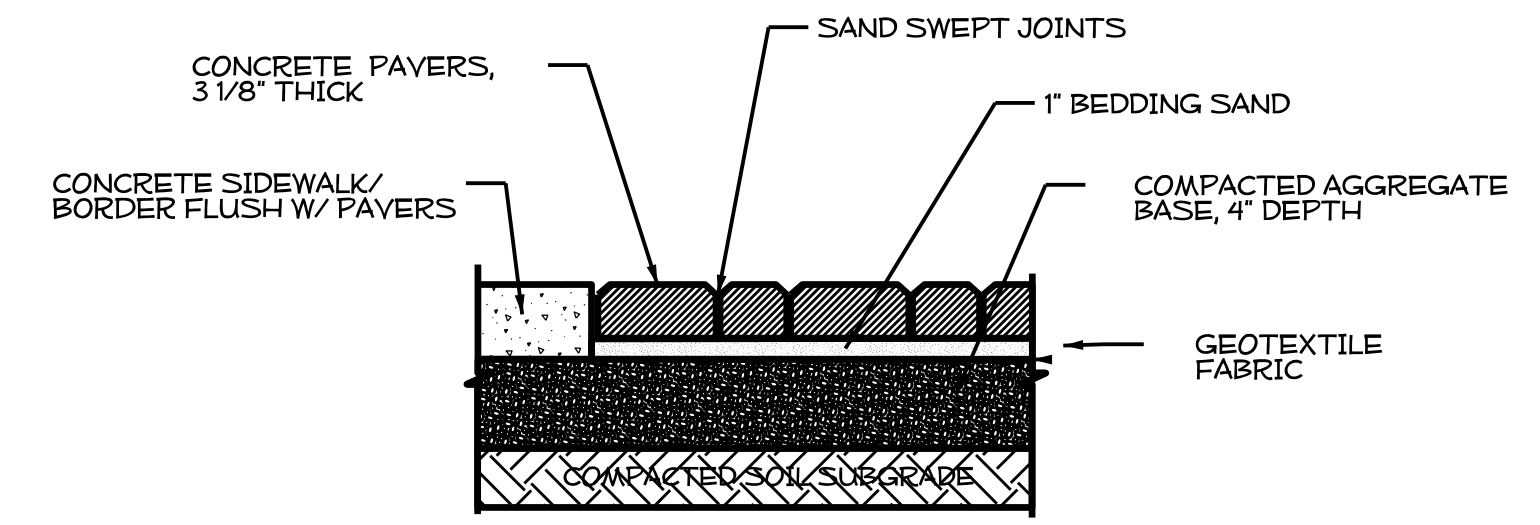
CONCRETE SIDEWALK - CONTROL JOINT

GENERAL NOTES:

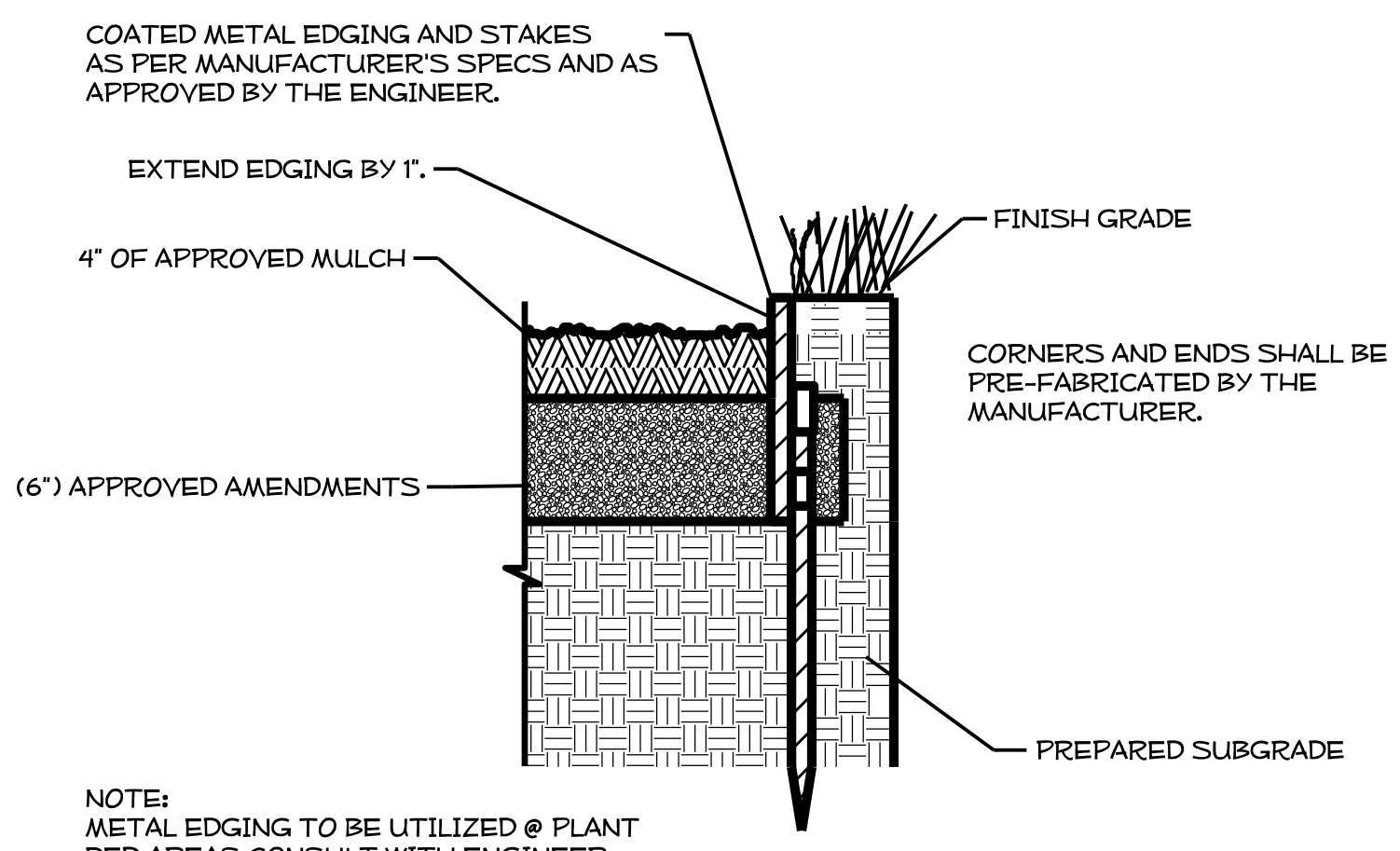
- 1) STANDARD 4" THICK CONCRETE SIDEWALK TO BE INSTALLED AS NOTED ON PLANS; CONTROL JOINT EVERY 5' (OR SAME DIMENSION AS SIDEWALK WIDTH) AND EXPANSION JOINT EVERY 30' (AND WHERE THE SIDEWALK ADJOINS ANOTHER HARD SURFACE).
- 2) CONCRETE PAVER BORDER AS SHOWN ON PLANS:
 - 9" CAST IN PLACE CURB OR
 - METAL RESTRAINT AS SPEC'D.
- 3) PAVER PATTERN, COLOR, AND DIMENSIONS AS DEFINED IN PLANS, DETAILS, OR SPECIFICATIONS.
- 4) ALL HARDSCAPE SURFACES SHALL BE GRADED PROPERLY TO DRAIN TO DESIGNATED LANDSCAPE AREAS OR DROP INLETS.
- 5) WHERE PERMEABLE PAVERS ARE INSTALLED, COMPLETE CONTROL OF CONSTRUCTION PRACTICES ARE VITAL NO DEBRI, SOIL, OR UNSPECIFIED MATERIAL SHALL COME IN TO CONTACT (OR BE LAYED UPON) THE COMPLETED SURFACE OR COMPROMISE INSTALLED DRAINAGE LAYERS.



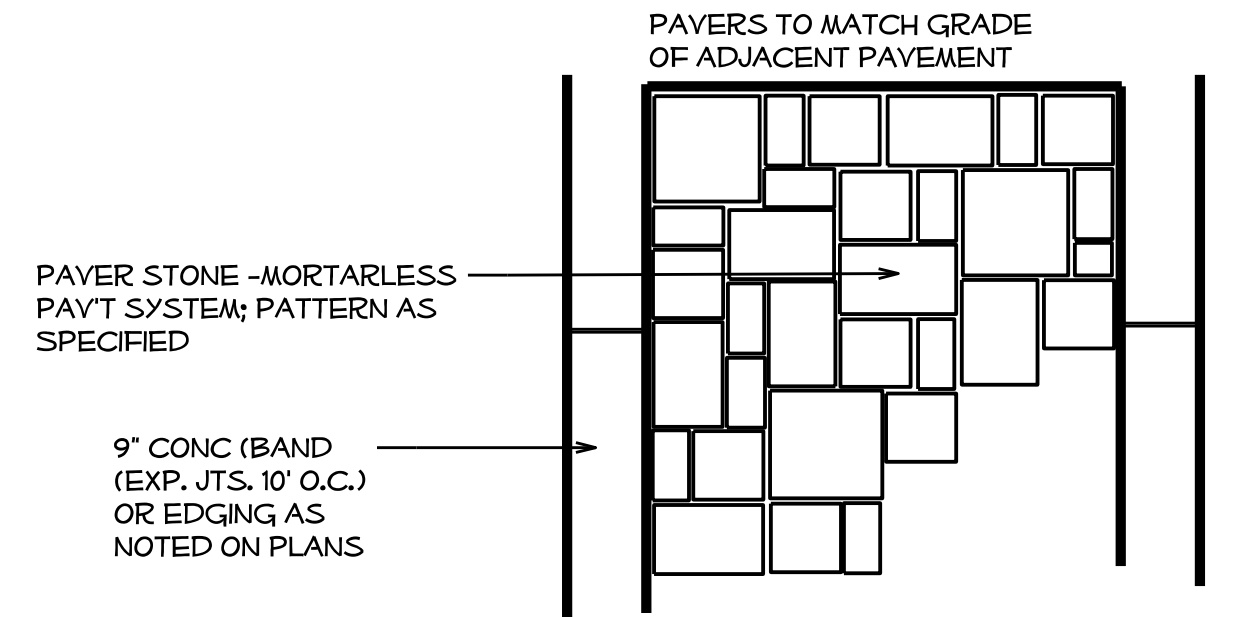
CONC PAVER DETAIL A



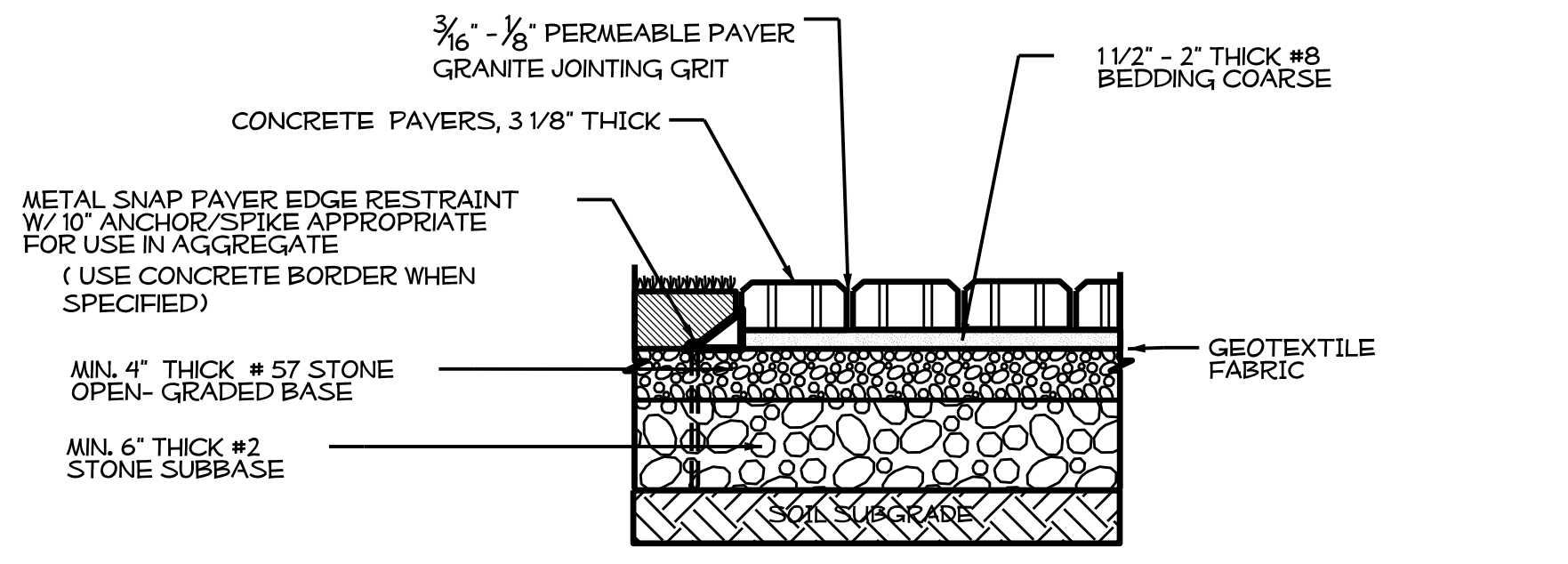
CONC PAVER DETAIL B



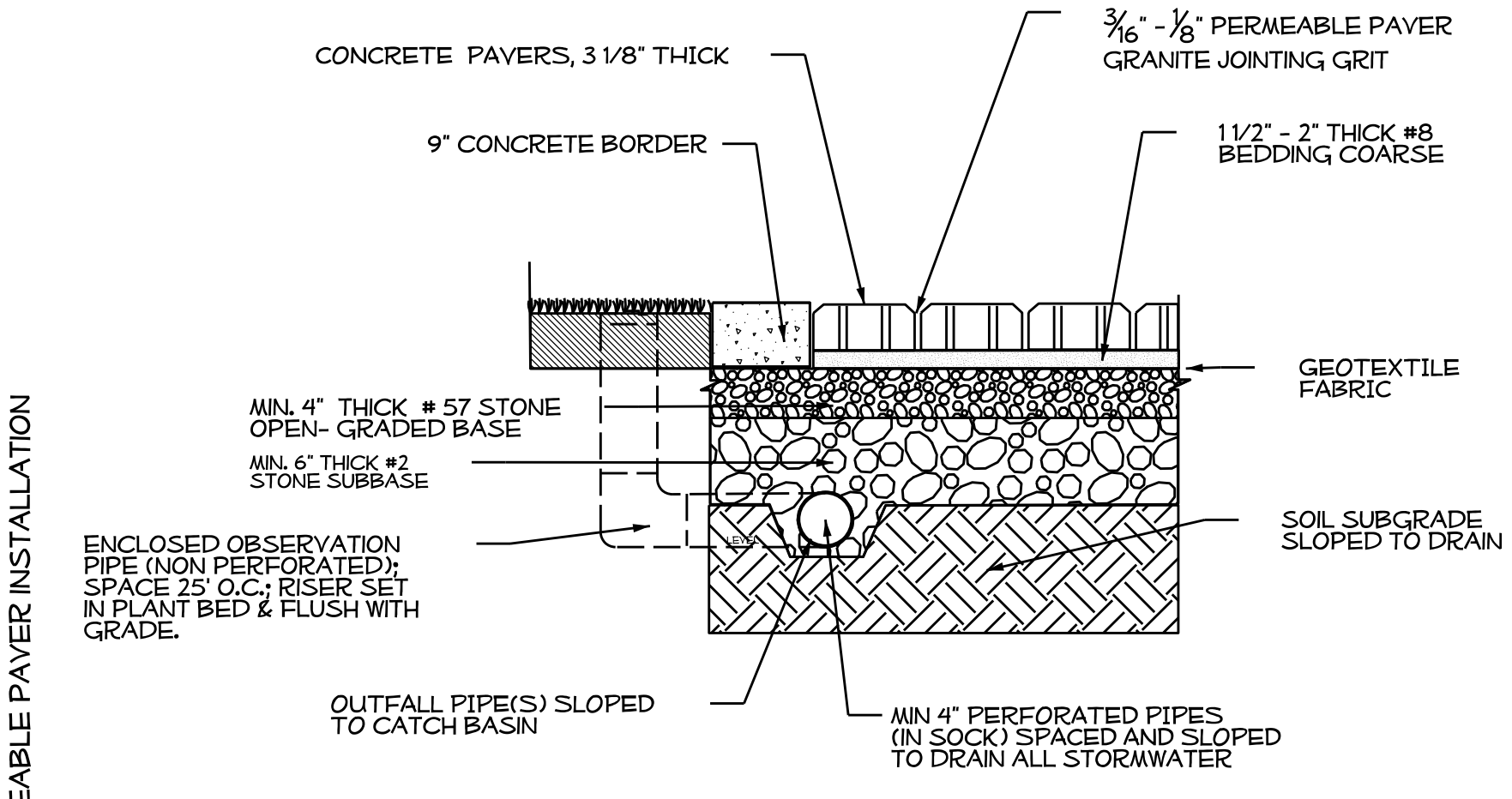
METAL EDGING



TYPICAL PAVER PATTERN



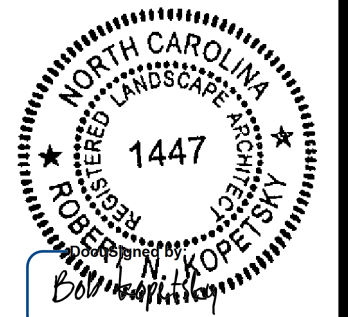
PERMEABLE CONC PAVER DETAIL A



PERMEABLE CONC PAVER DETAIL B

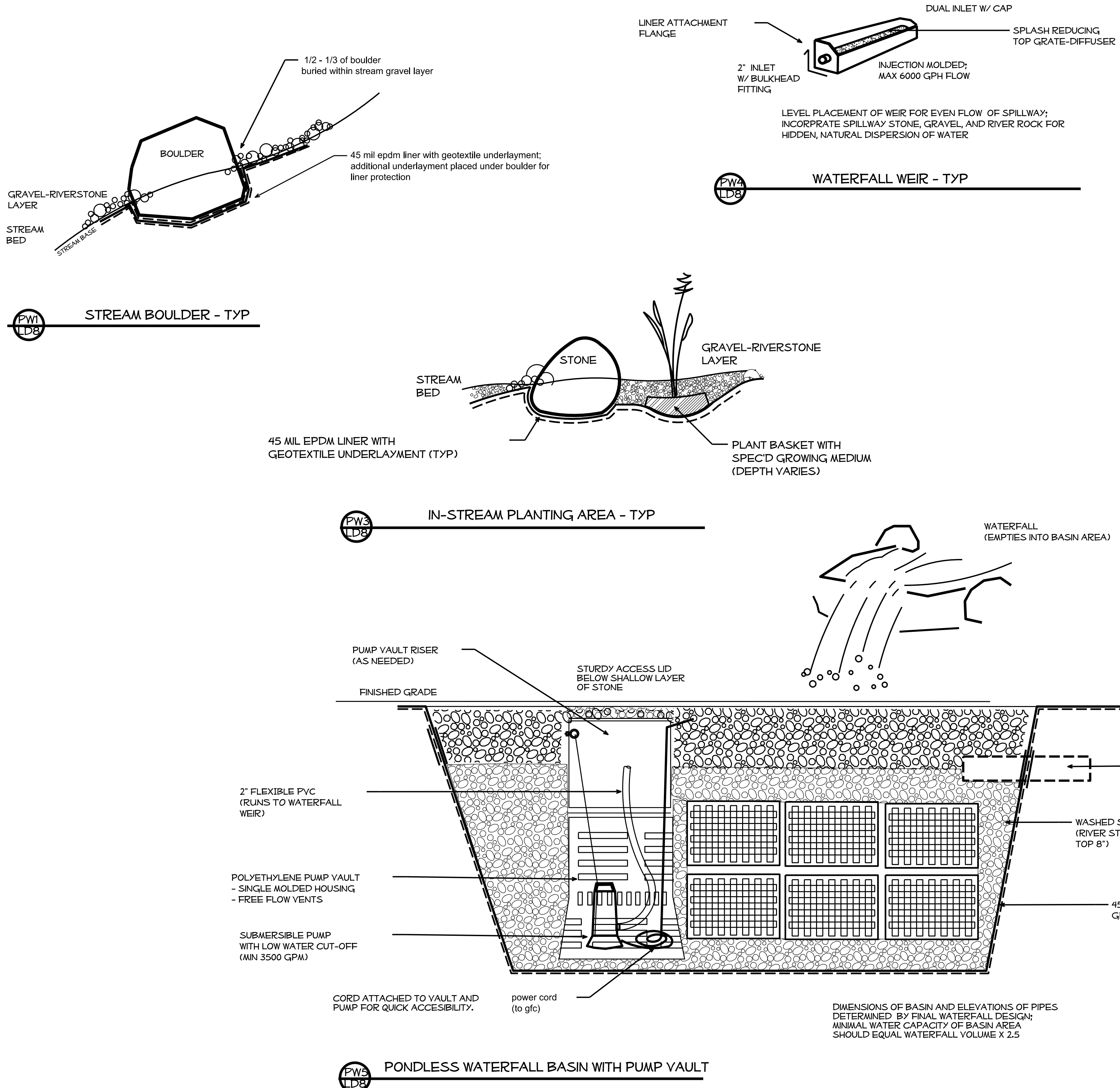
STATE	NC	T.J.P. #	SHEET #
WBS #		F.A. Project #	Description
			P.E.
			RW
3707.3.23			CONST.

North Carolina Department of Transportation
Division of Highways
1 South Wilmington Street Raleigh, North Carolina



Plan:
I-40
Alamance Co. Rest Areas

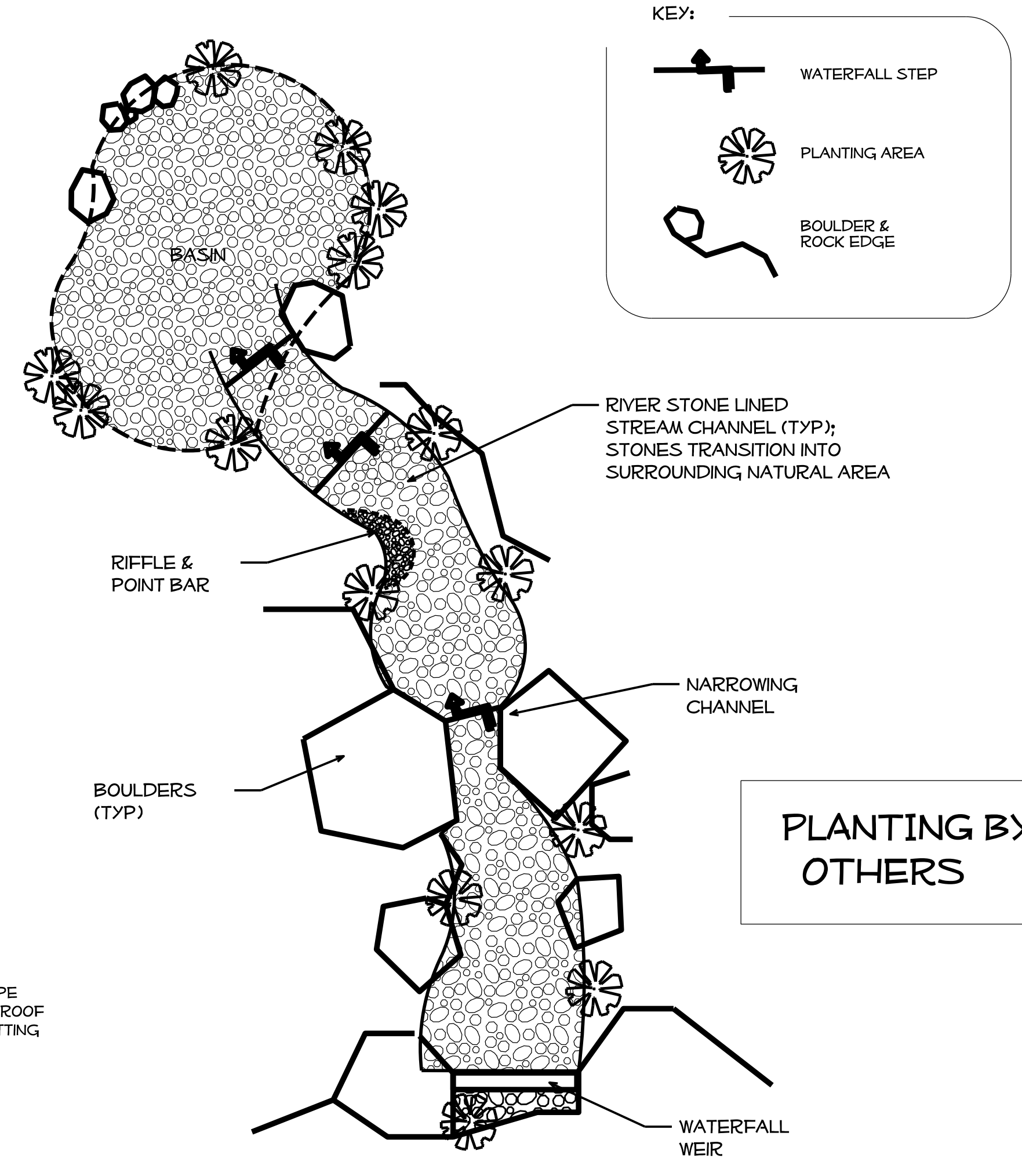
Plans Drawn By:
KOPETSKY
Scale
n/a
Date
3 / 5 / 15
Letting Date
2012 Standard Specifications
Sheet Description
SBL Waterfeature Detail
Sheet #
LD-02



NOTES:

RIFFLE- SHALLOW SEDIMENT GRAVEL BED EXTENDING IN TO STREAM.
POINTBAR- CRESCENT SHAPED DEPOSIT OF COARSE MATERIAL ON THE INSIDE BEND OF A STREAM.
POOL- DEEP FLAT AREA OF STREAM ON LOWER SIDE OF A WATERFALL/STEP; BOTTOM OF POOL AREA LINED WITH FINE GRANULAR ROCK.
CASCADE- SERIES OF STEPS /WATERFALLS.
WATERFALL- STEP OR VERTICAL DROP IN THE STREAM.

IN CONSTRUCTION OF WATERFALL STREAM, LOCATE 3-4 BOULDERS (ACCESSIBLE TO ADJACENT PATHWAY) FOR SITTING AND VIEWING STREAM.
CONFIRM LOCATIONS WITH LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.



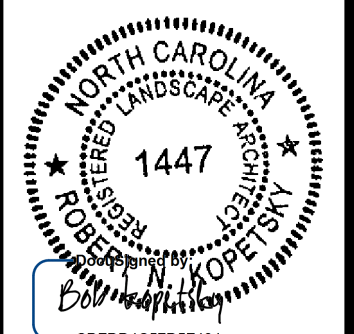
ALL BOULDERS SUPPLIED BY NCDOT; DELIVERED TO SITE AND CONTRACTOR IS RESPONSIBLE FOR THEIR PLACEMENT.

STATE NC	T.I.P. #	SHEET #
WBS #	F.A. Project #	Description
		P.E.
		RW
3707.3.23		CONST.

North Carolina Department of Transportation

Division of Highways

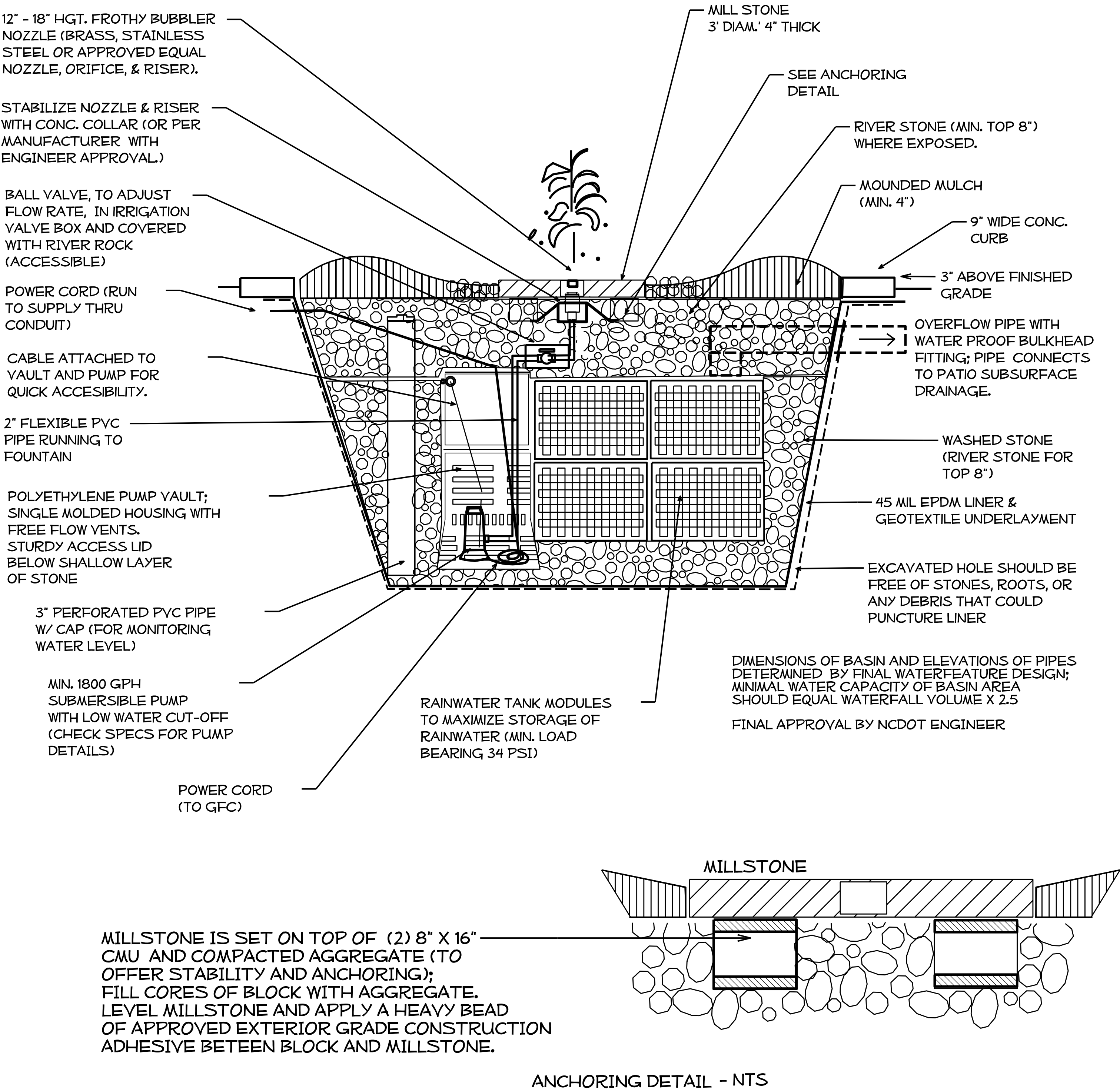
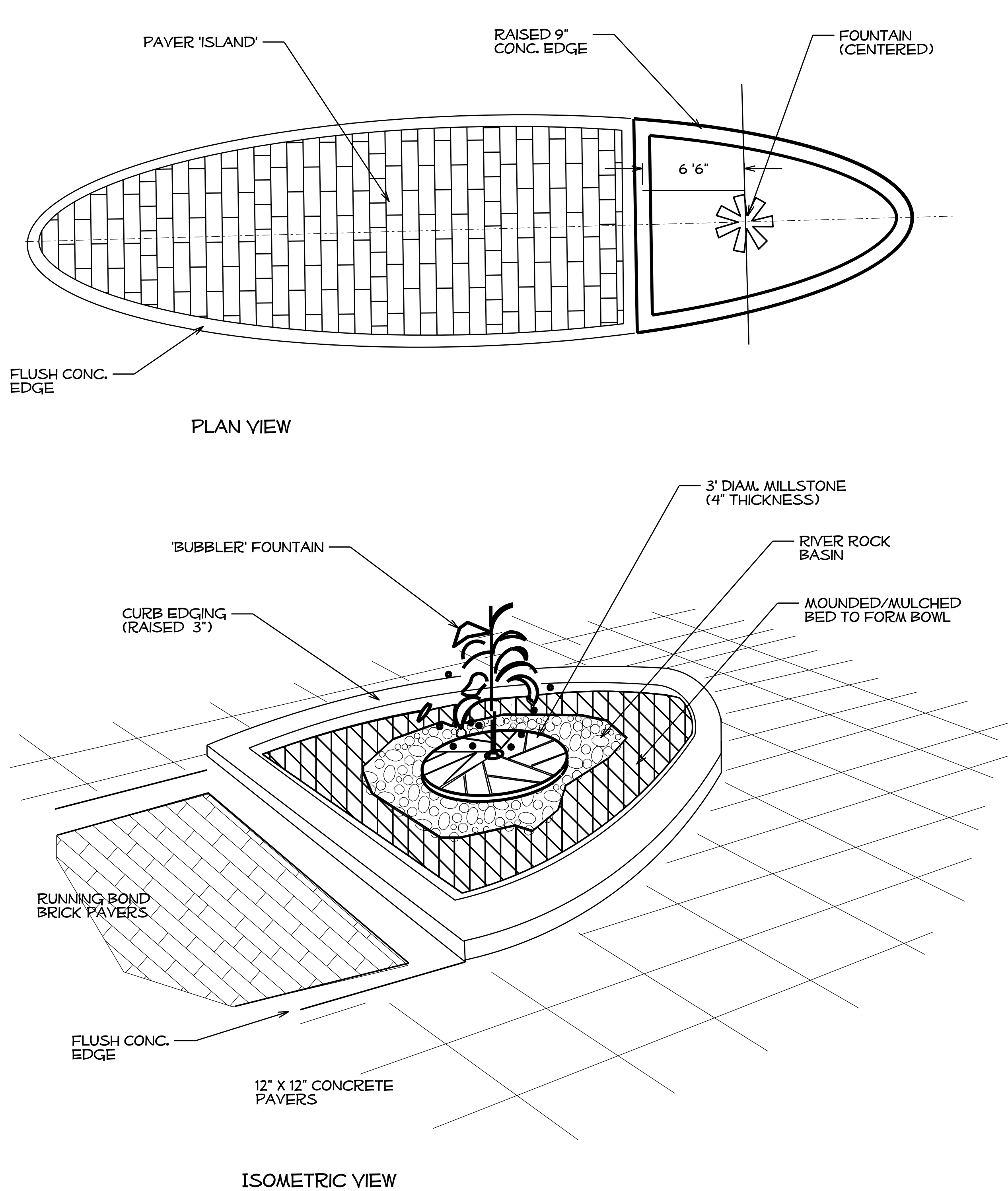
1 South Wilmington Street Raleigh, North Carolina



I-40

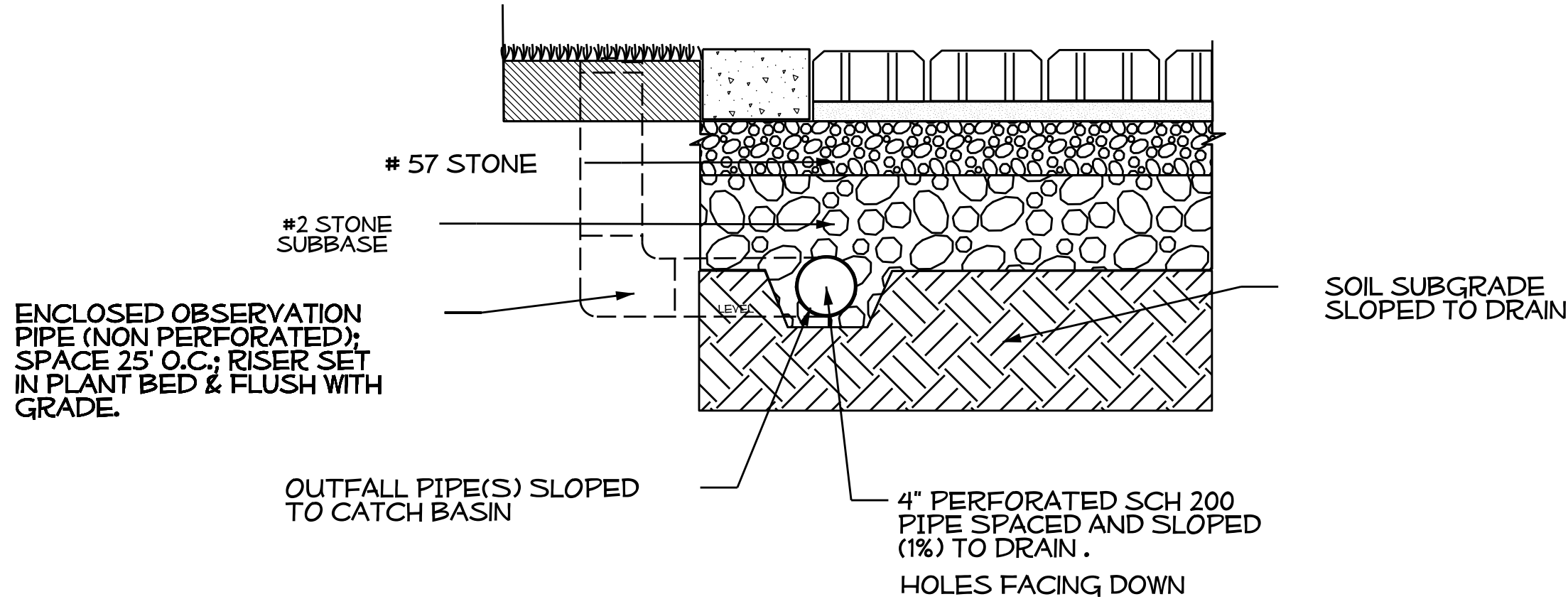
Alamance Co. Rest Areas

Plans Drawn By:	KOPETSKY
Scale	n/a
Date	3 / 5 / 15
Letting Date	
2012 Standard Specifications	
Sheet Description	NBL Waterfeature Detail
Sheet #	LD-03

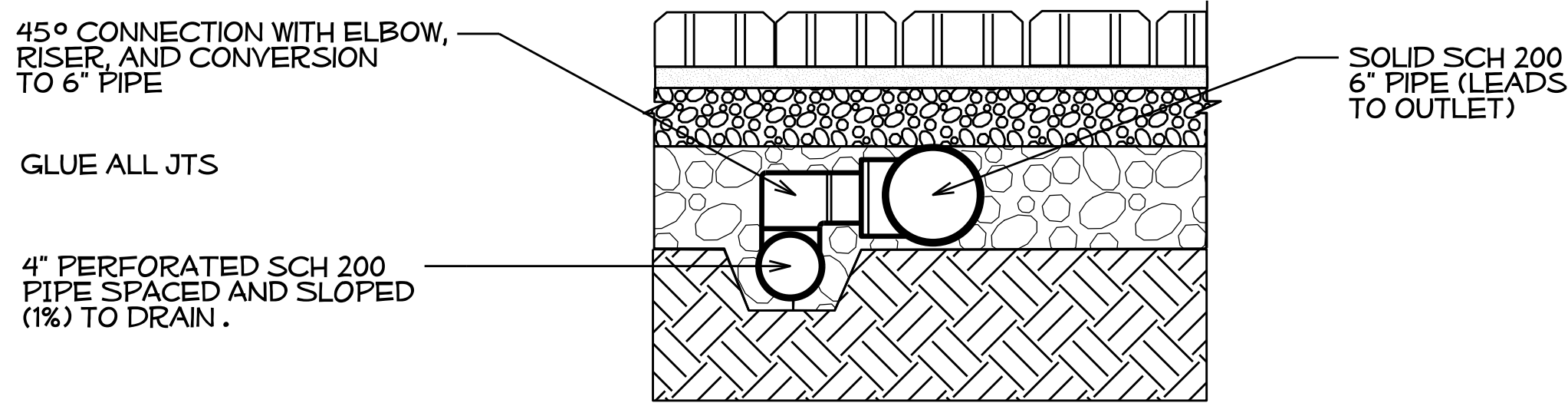


BUBBLER FOUNTAIN, BASIN WITH PUMP VAULT

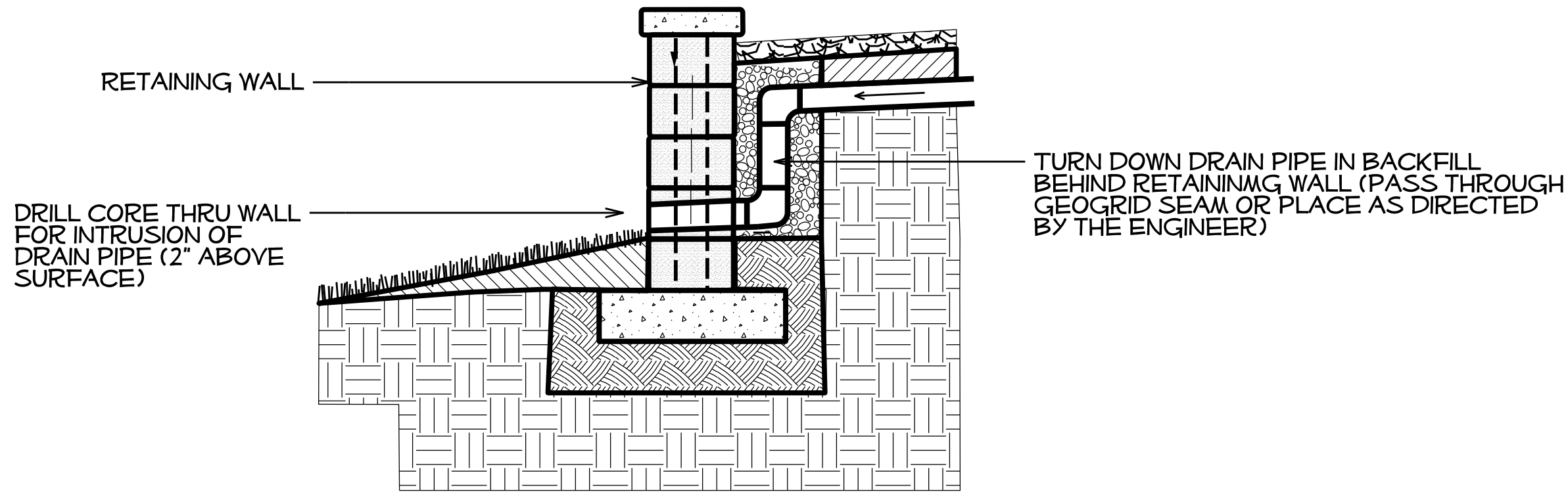
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WBS #	F.A. Project #	Description
		P.E.
		RW
3707.3.23		CONST.



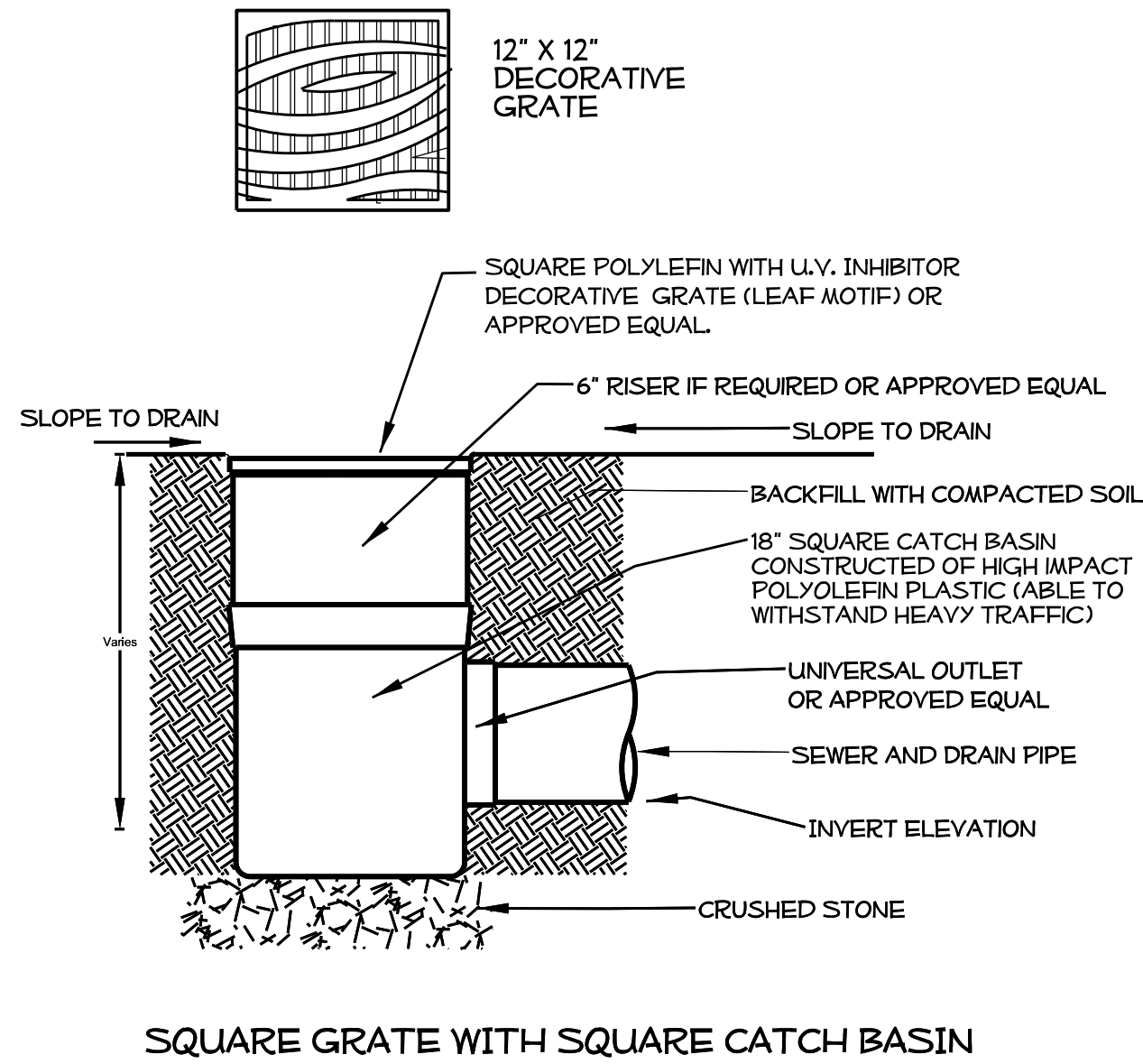
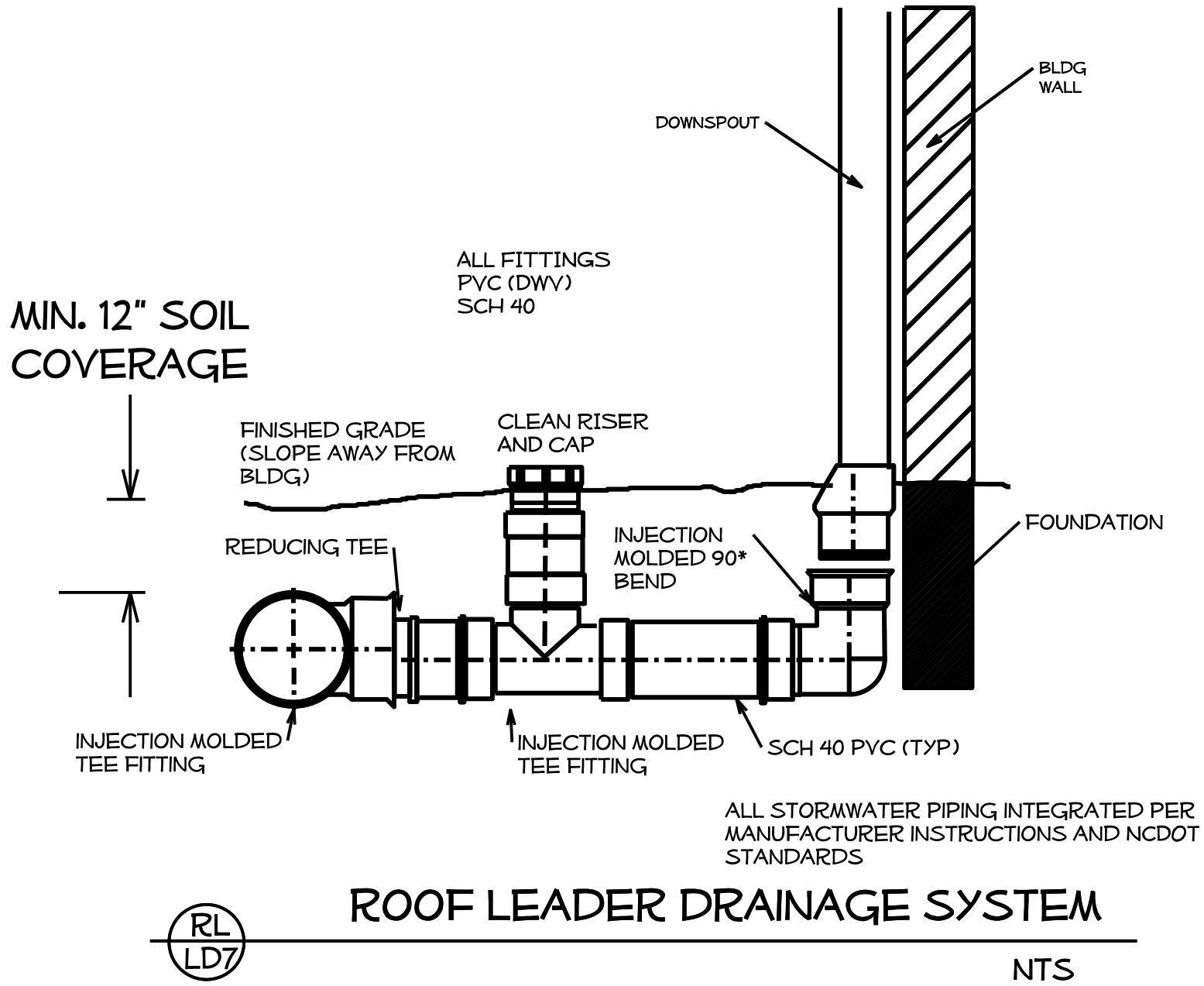
TYPICAL PERMEABLE PAYER DETAIL (SEE PAVEMENT DETAIL SHEET)



PERMEABLE PAVEMENT DRAINAGE CONNECTION TO 6' PIPE



SD LD7 SUBSURFACE DRAINAGE NTS



North Carolina Department of Transportation

Division of Highways

1 South Wilmington Street Raleigh, North Carolina



Plan :

Plans Drawn By:

Scale

Date

Letting Date

Alamance Co. Rest Areas

2012 Standard Specifications

Sheet Description

Drainage Details

Sheet #

KOPETSKY

n/a

3 / 5 / 15

2012 Standard Specifications

Drainage Details

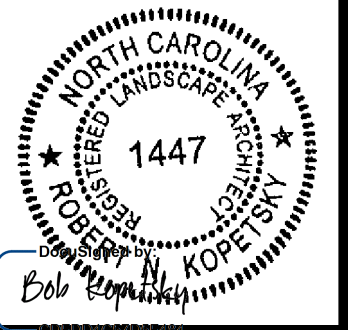
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STATE NC	T.J.P. #	SHEET #
WBS #	F.A. Project #	Description
		P.E.
		RW
3707.3.23		CONST.

North Carolina Department of Transportation

Division of Highways

1 South Wilmington Street Raleigh, North Carolina



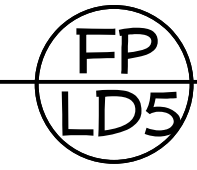
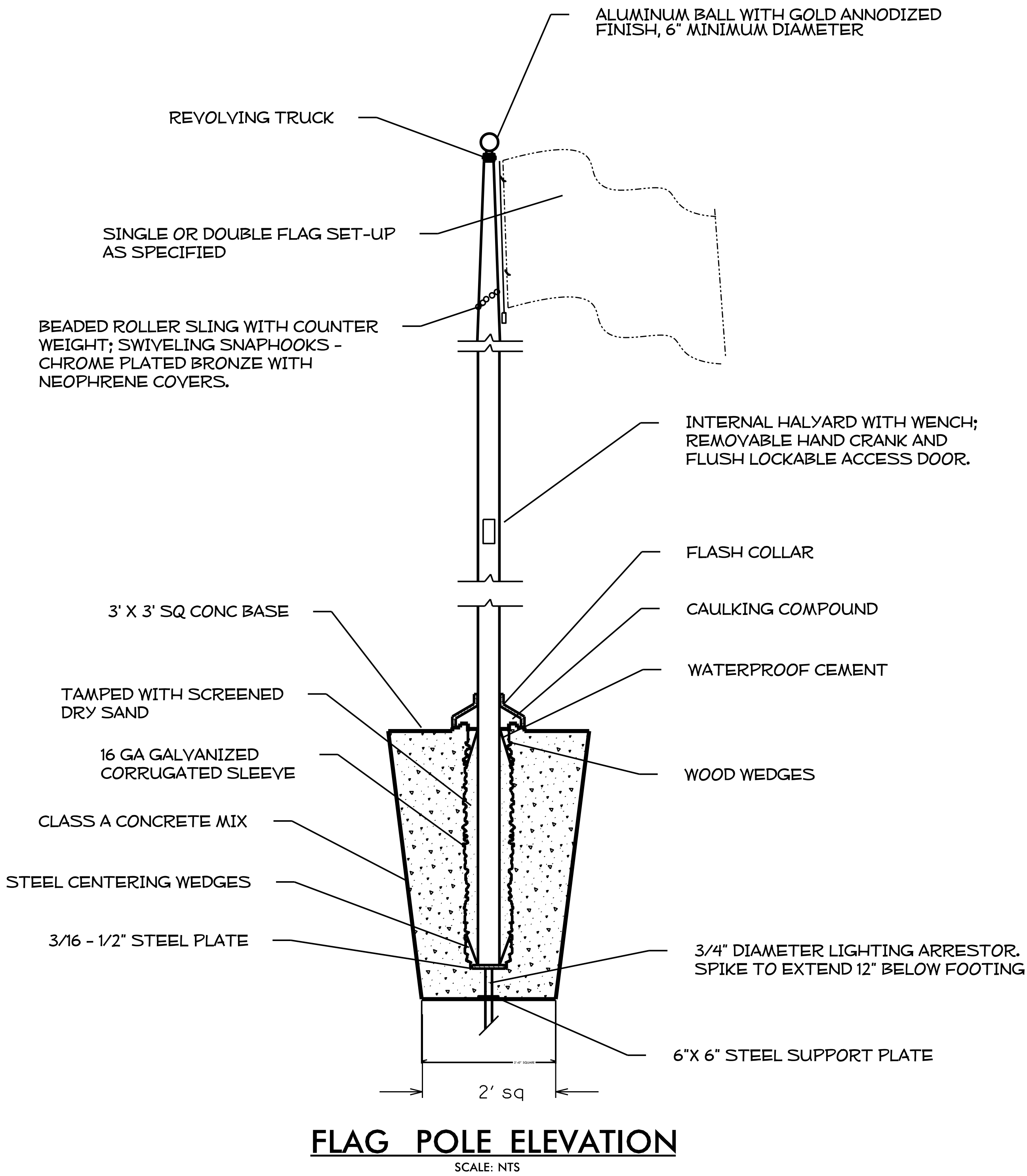
Plan :

I-40

Alamance Co. Rest Areas

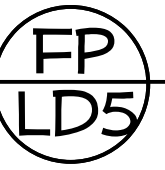
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KOPETSKY
Scale
n/a
Date
3 / 5 / 15
Letting Date

2012 Standard Specifications
Sheet Description
Flagpole & Split Rail Details
Sheet #
LD-05



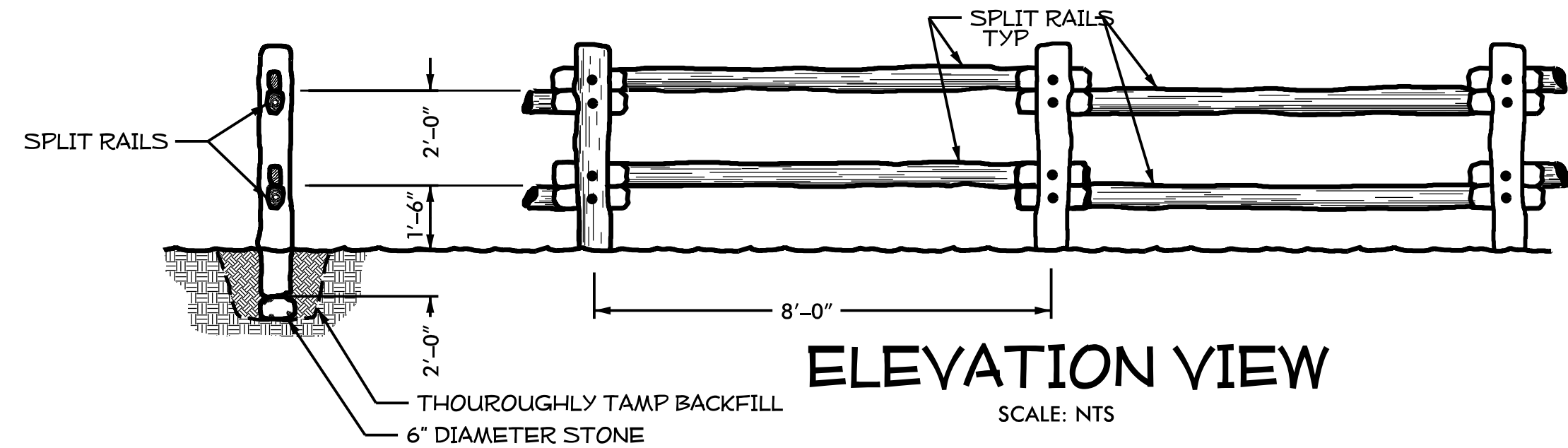
FLAGPOLE

NTS

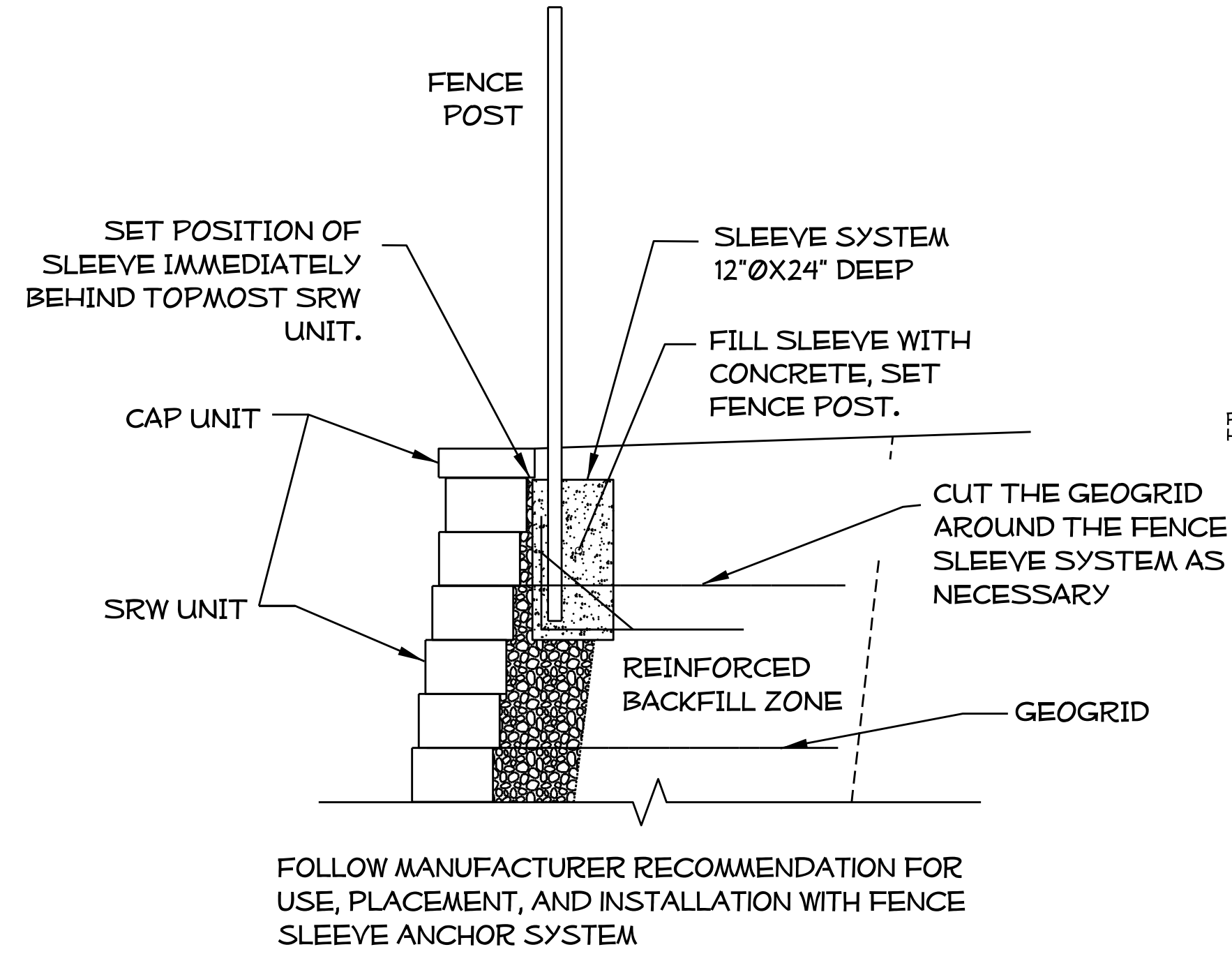
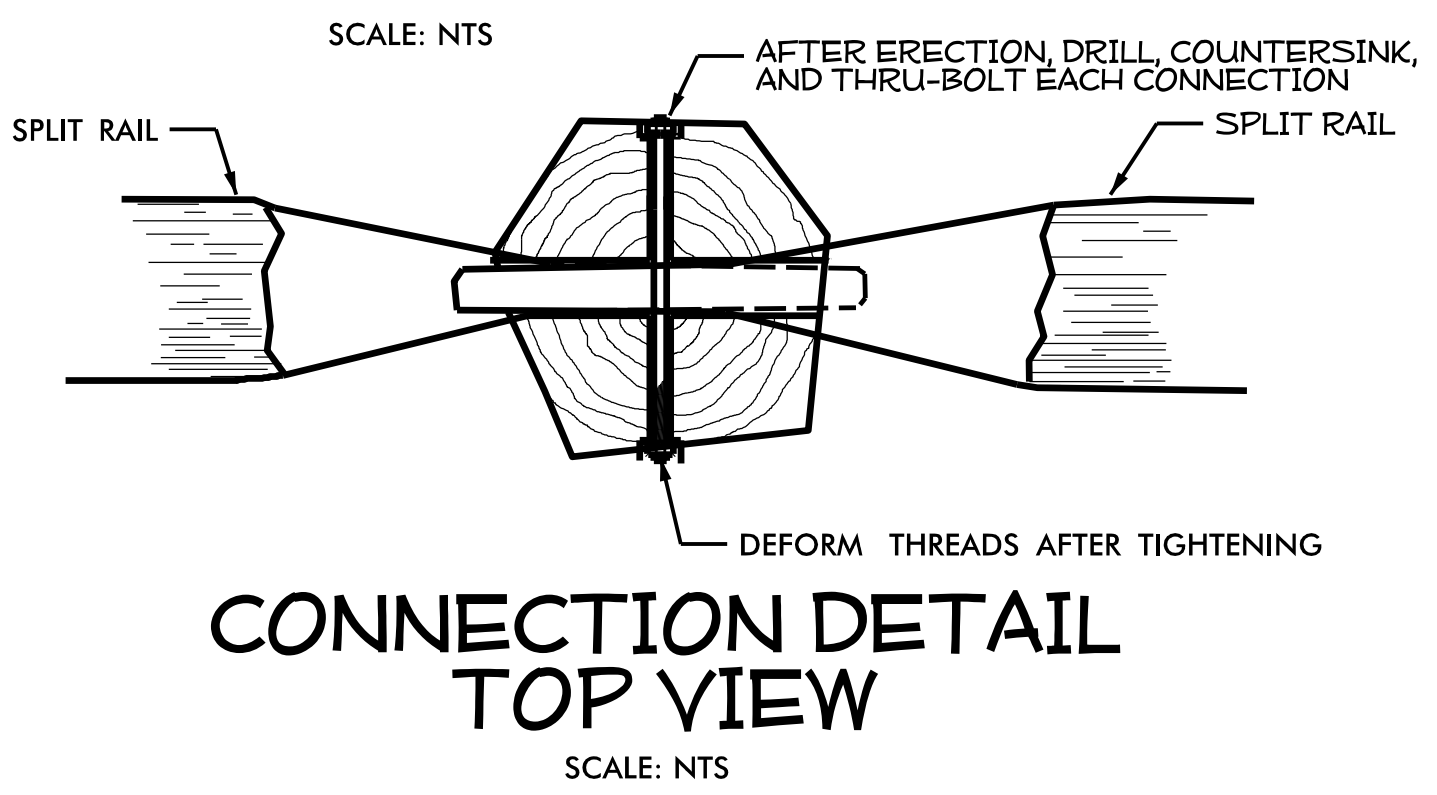


SPLIT RAIL FENCE

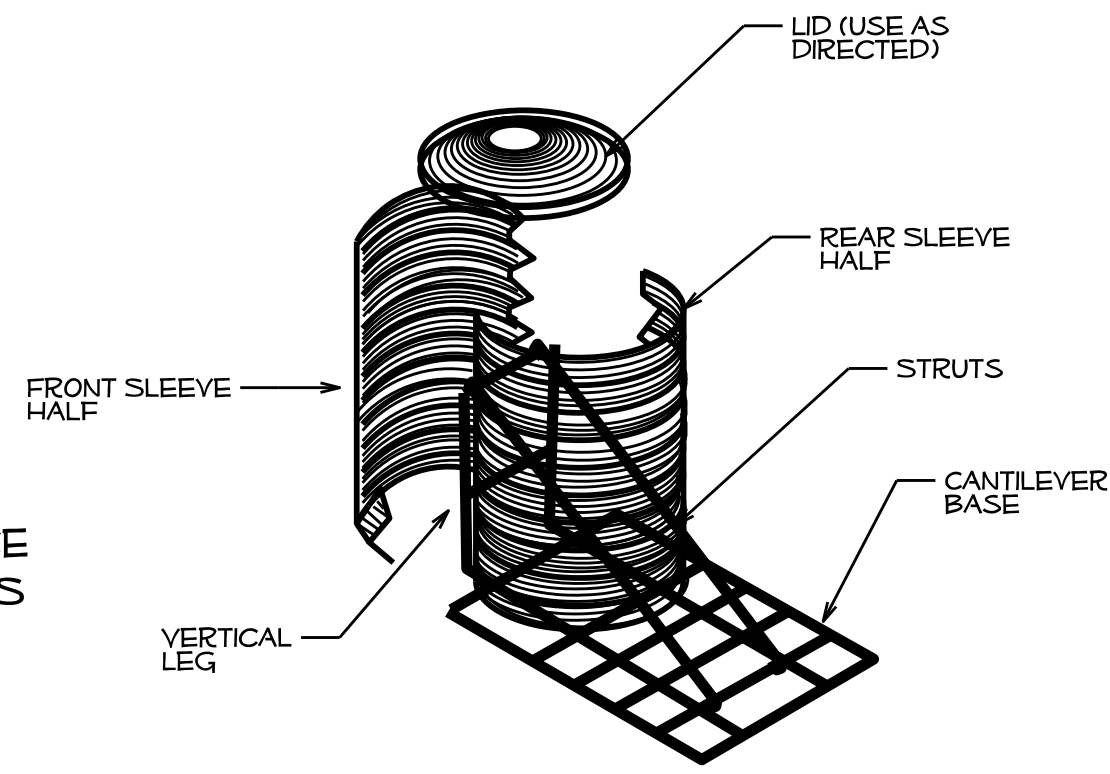
NTS



- MATERIALS:**
- 1) POSTS - 6" NOMINAL DIAMETER.
 - 2) RAILS - 4" NOMINAL DIAMETER
 - 3) BOLTS, NUTS, AND WASHERS, 1/2" DIAMETER GALVANIZED

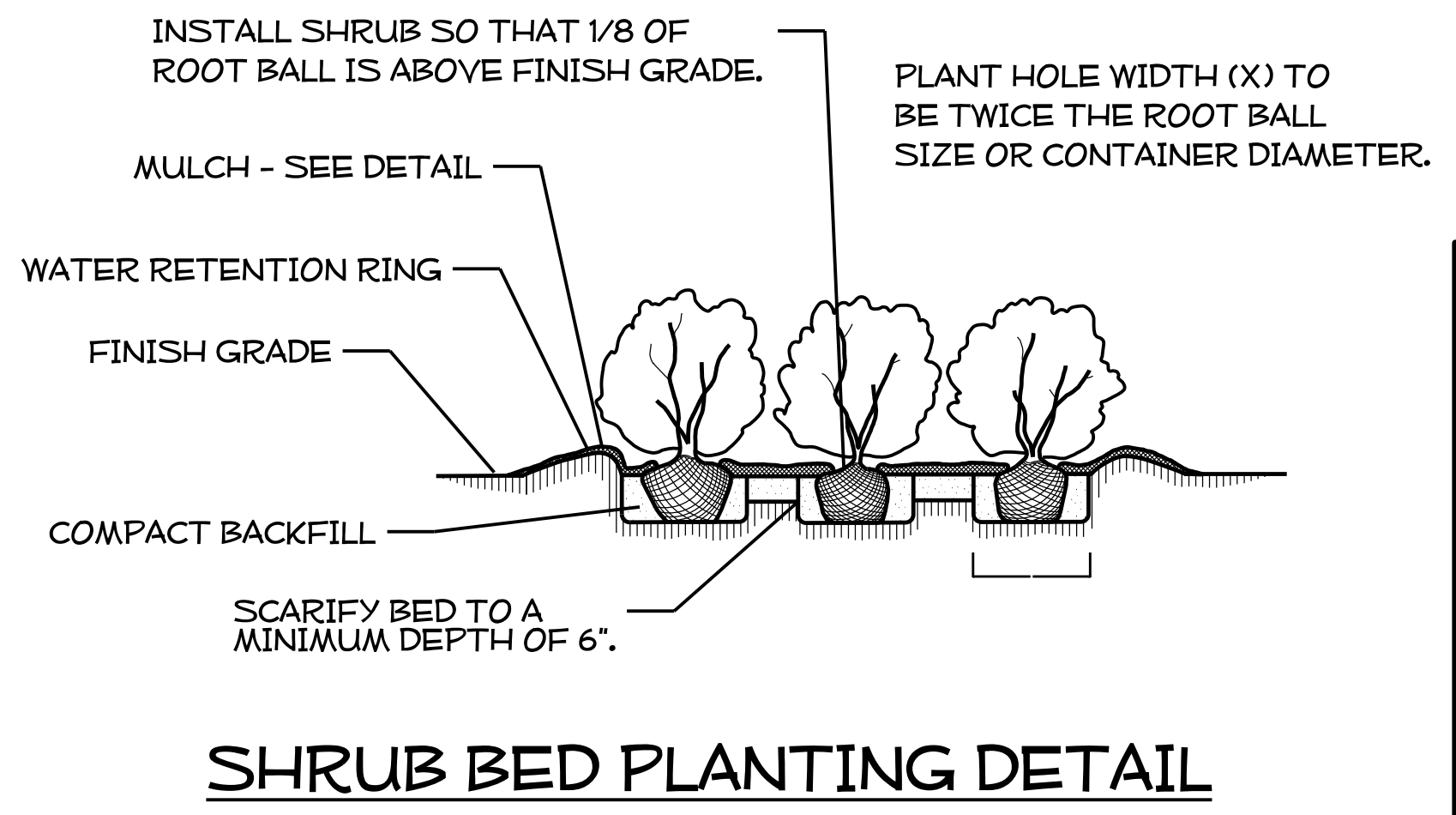
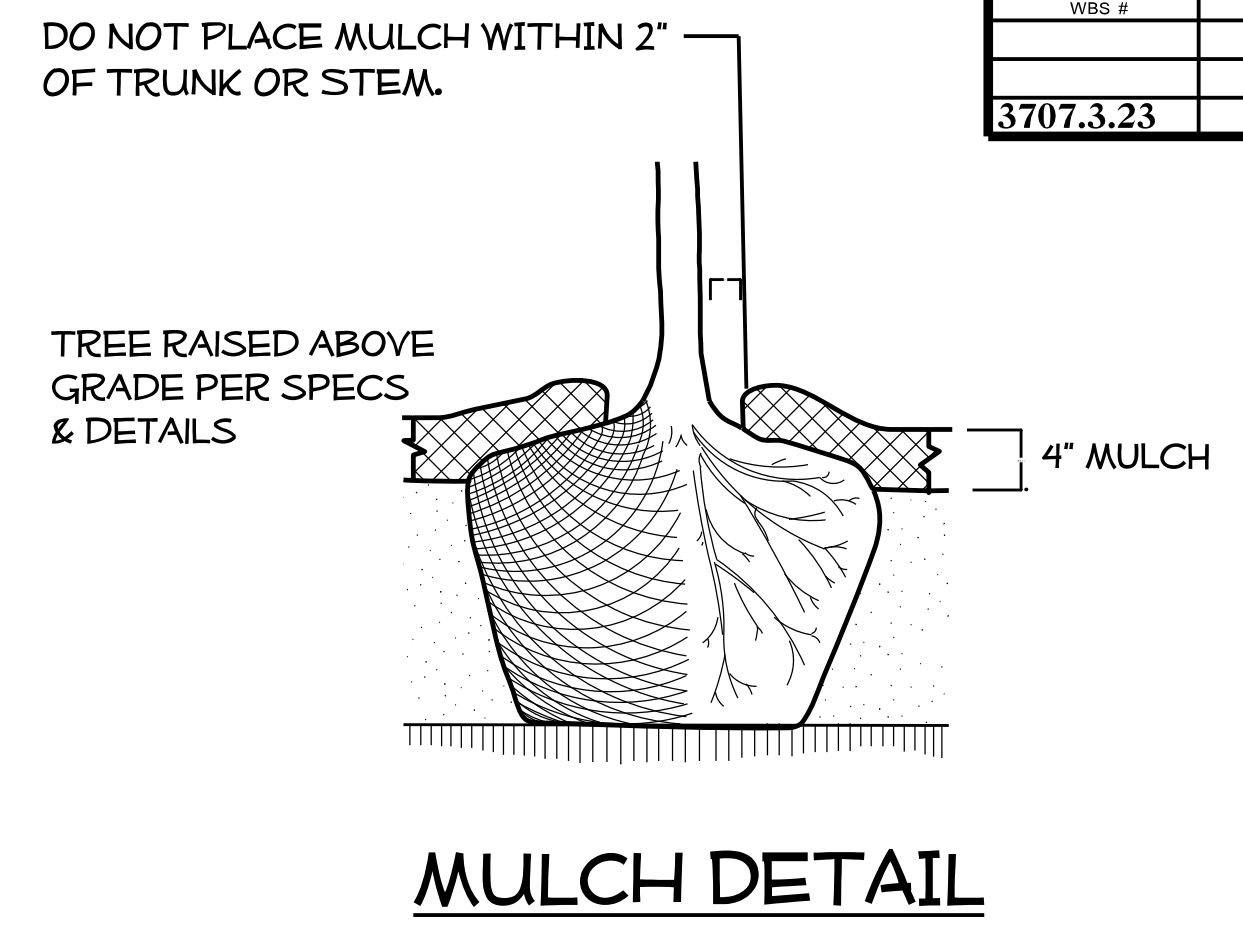
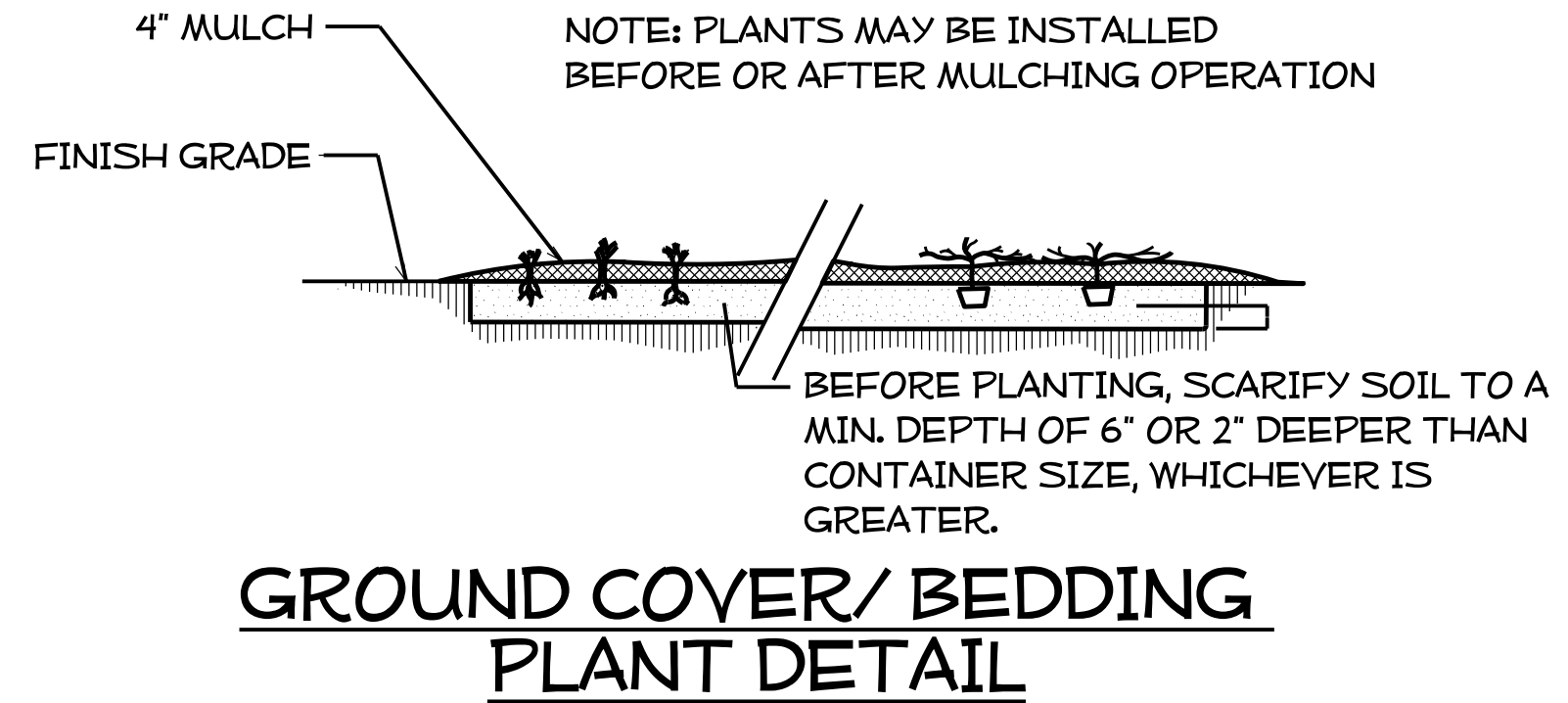
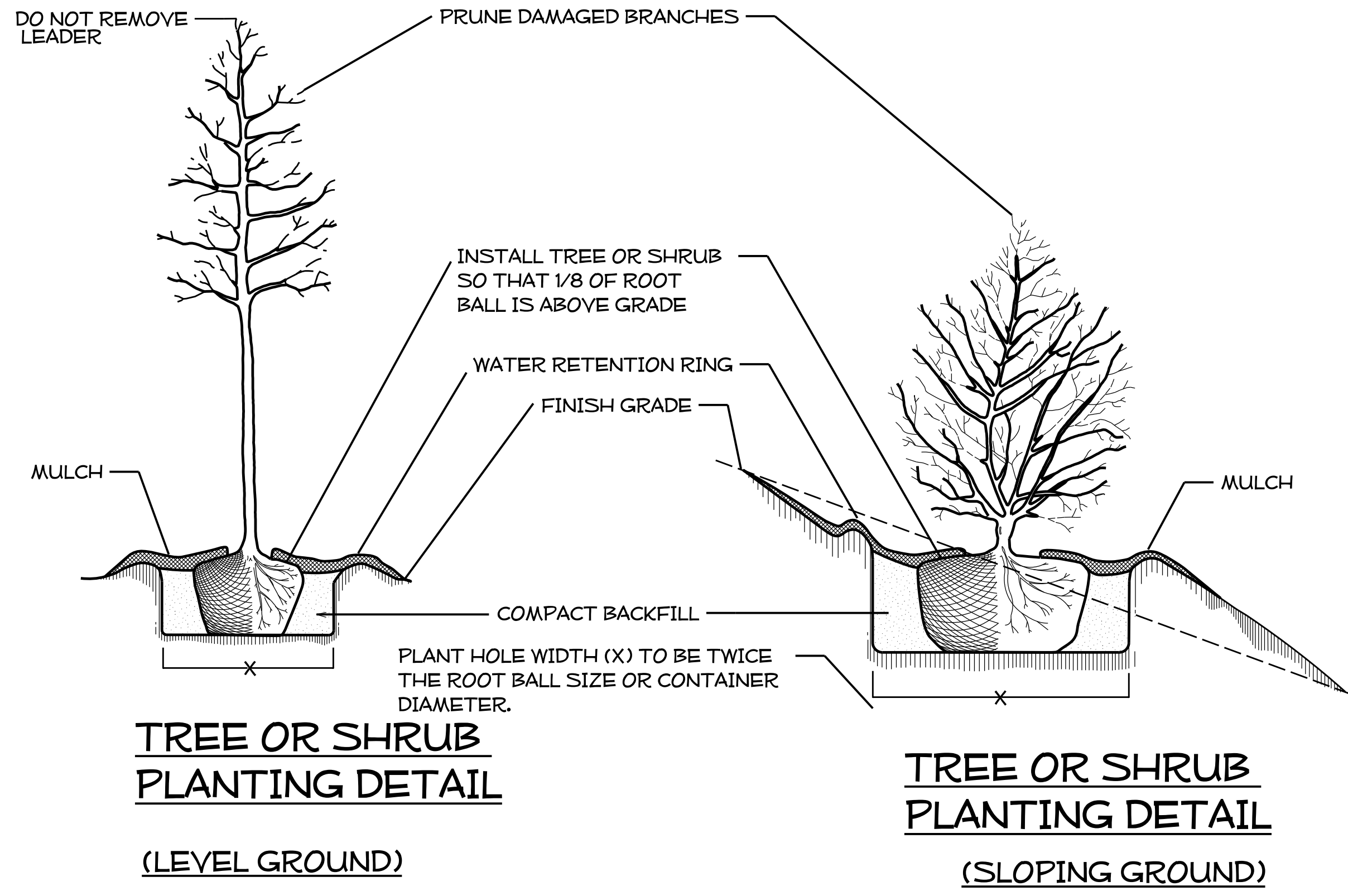


DETAIL OF FENCE POST INSTALLATION USING A SLEEVE ANCHOR

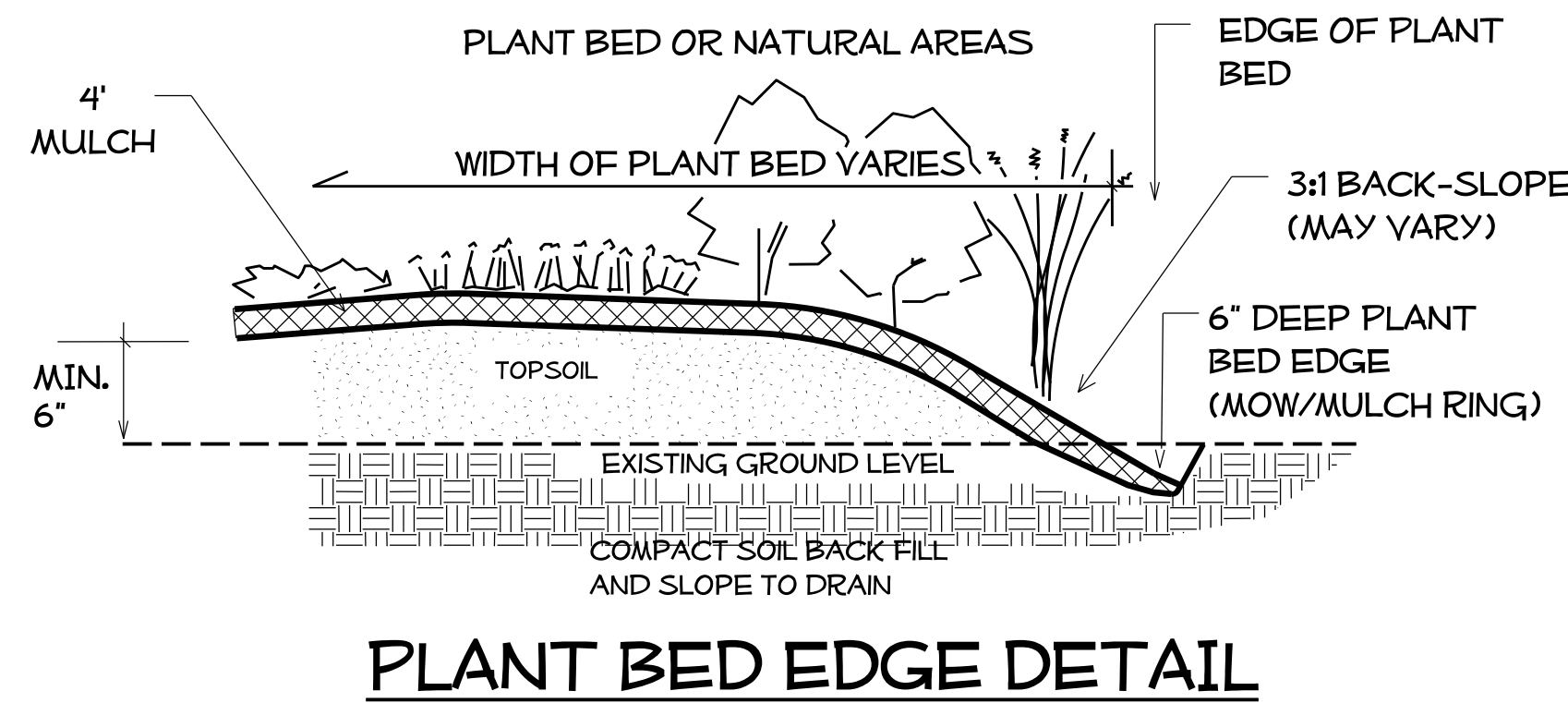
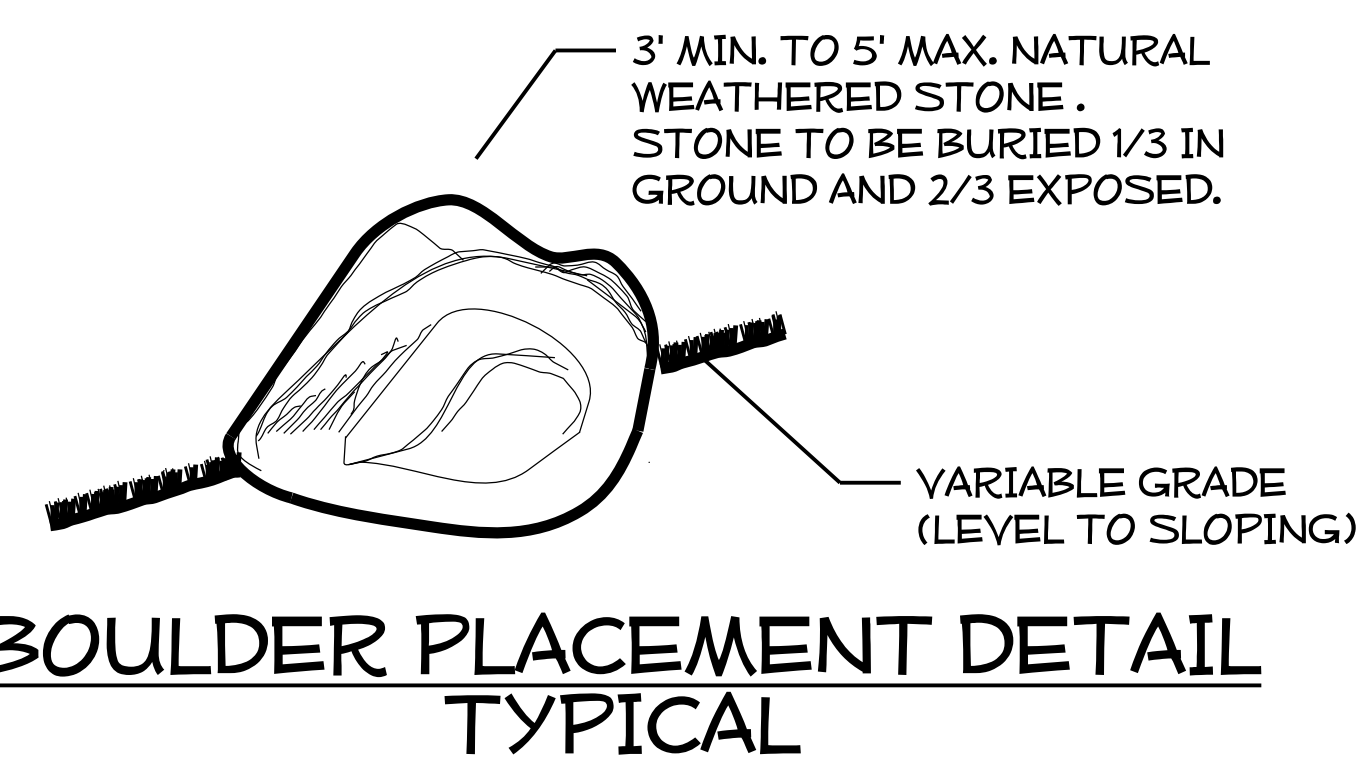
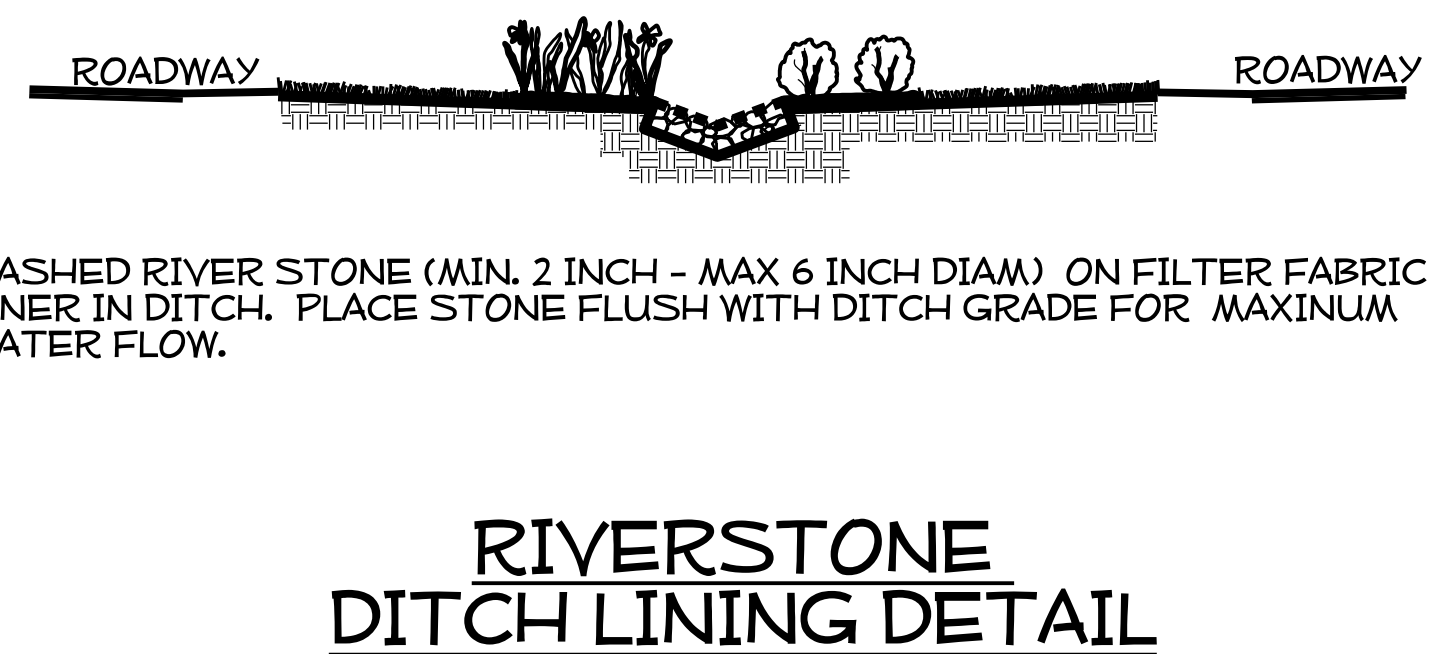
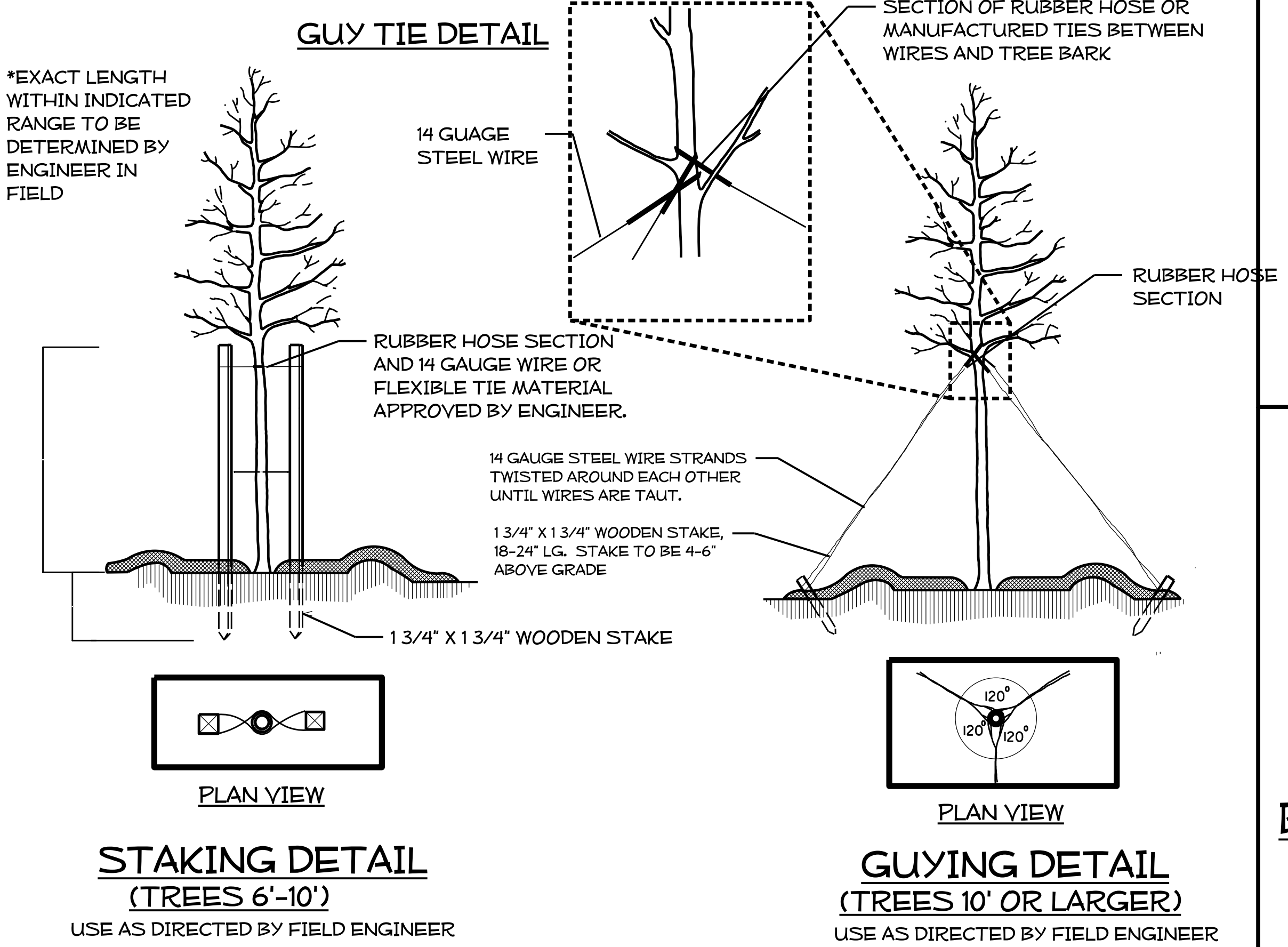


ISOMETRIC OF FENCE IN SLEEVE ANCHOR SYSTEM

REFER TO PLANS FOR CONSTRUCTION OF RETAINING WALL AND FENCE LOCATION



- NOTES:**
- SCHEDULE FOR PLANT HOLE SIZE: PLANT HOLE WIDTH (X) TO BE TWICE THE ROOT BALL SIZE OR CONTAINER DIAMETER.
 - SEE STANDARD SPECIFICATIONS FOR PLANT BED FUMIGATION AND HERBICIDAL TREATMENT.
 - APPLY FERTILIZER AT PLANTING TIME IN THE FORM OF A SLOW RELEASE PELLET OR TABLET. APPLY AT RATE RECOMMENDED BY MANUFACTURER. BOTH RATE AND FORMULATION MUST BE APPROVED BY FIELD ENGINEER PRIOR TO APPLICATION.
 - REMOVE WIRE BASKET AND FOLD BURLAP BACK FROM TOP OF ROOT BALL BEFORE BACKFILLING IS COMPLETE.
 - ALL PRUNING TO FOLLOW STANDARD ARBORICULTURAL PRACTICES AS SPECIFIED BY INTERNATIONAL SOCIETY OF ARBORICULTURE.
 - DO NOT ATTEMPT TO STRAIGHTEN A TREE THAT HAS BEEN PLANTED AT AN ANGLE WITH THE USE OF STAKING OR GUYING. DIG TREE AND REPLANT TO UPRIGHT POSITION.



STATE NC	T.I.P. #	SHEET #
WBS #	P.A. Project #	Description
		P.E.
		RW
		CONST.
3707.3.23		

North Carolina Department of Transportation

Division of Highways

1 South Wilmington Street Raleigh, North Carolina

1-40 Alamance Co. Rest Areas

Plan: 1447

Plans Drawn By: KOPETSKY

Scale: n/a

Date: 3 / 5 / 15

Letting Date:

2012 Standard Specifications

Sheet Description: Planting Details

Sheet #: LD-06

I-40/I-85 ALAMANCE COUNTY REST AREA VENDING BUILDINGS
"BID DOCUMENTS"

SCO ID #: 14-11287-01A

I-40/I-85 MILE MARKER 139, ALAMANCE COUNTY, NC
NC DEPARTMENT OF TRANSPORTATION
FACILITIES MANAGEMENT DIVISION

ARCHITECT OF RECORD

LISA L. KEEL, AIA
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
FACILITIES MANAGEMENT DIVISION

STRUCTURAL ENGINEER OF RECORD

MICHAEL MOUNTCASTLE, P.E.
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
FACILITIES MANAGEMENT DIVISION

PLUMBING / MECHANICAL / ELECTRICAL ENGINEER OF RECORD

BURKE DESIGN GROUP, BEN BURKE, P.E.
(919) 771-1916
benburke@rr.nc.com

SITE DEVELOPMENT-LANDSCAPE ARCHITECT OF RECORD

BOB KOPETSKY, RLA
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
ROADSIDE ENVIRONMENTAL UNIT

INDEX OF DRAWINGS

- T1 TITLE SHEET
- T2 BUILDING CODE SUMMARY

STRUCTURAL

- S1 FOUNDATION PLAN; FRAMING PLAN
- S2 DETAILS
- S3 DETAILS, GENERAL NOTES

ARCHITECTURAL

- A1.1 FLOOR PLAN; REFLECTED CEILING PLAN; ROOF PLAN & DETAILS
- A2.1 EXTERIOR ELEVATIONS
- A2.2 EXISTING BUILDING ELEVATION & DETAILS
- A3.1 BUILDING SECTIONS
- A3.2 WALL SECTIONS & DETAILS
- A4.1 ROOM FINISH & DOOR SCHEDULES; DOOR ELEVATIONS; HEAD, JAMB & SILL DETAILS

PLUMBING

- P1 PLUMBING PLAN

MECHANICAL

- M1 HVAC PLAN

ELECTRICAL

- E1 ELECTRICAL DETAILS/SPECIFICATIONS
- E2 ELECTRICAL PLANS

SITE UTILITIES

- U1 NBL UTILITY PLAN
- U2 SBL UTILITY PLAN
- U3 UTILITY DETAILS

ABBREVIATIONS AND SYMBOLS

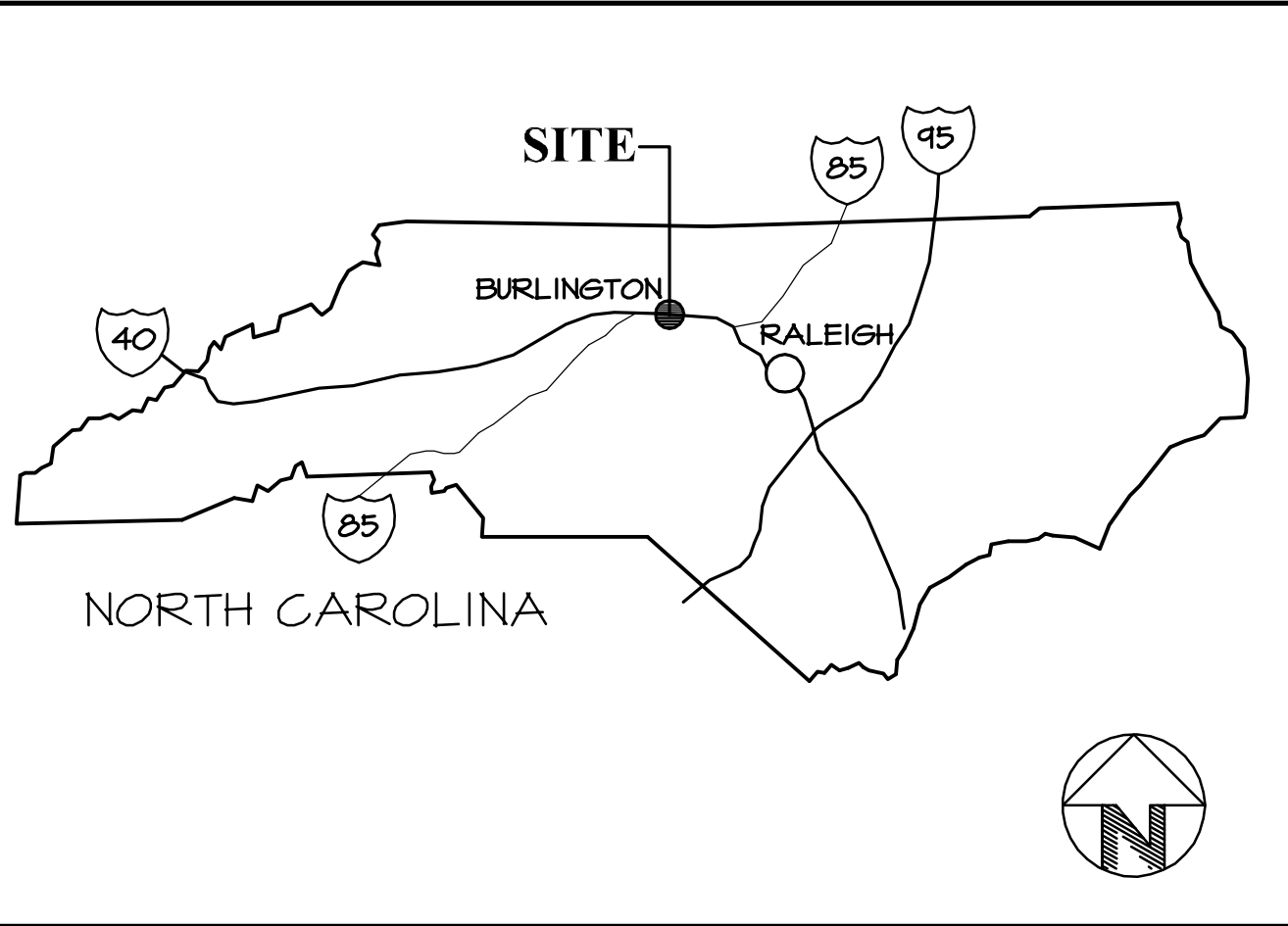
Table of abbreviations and symbols including: EARTH, OTHER SOIL, MULCH, POROUS FILL, GRAVEL, BRICK, OTHER MATL, CMU, CONCRETE, BATT INSULATION, RIGID INSULATION, FIBER CEMENT BOARD, FINISH WOOD, ROUGH WOOD CONTINUOUS, ROUGH WOOD BLOCKING, PLYWOOD, OSB, STEEL, METAL, GYPSUM BOARD, OTHER MATERIAL, GLASS, GLAZING, ACOUSTICAL TILE, DETAIL NUMBER, SHEET NUMBER, KEYED NOTE, ROOM NUMBER, DOOR MARKER, WINDOW MARKER, CENTER LINE, DATUM LINE, HIDDEN LINE, BREAK LINE, PROPERTY LINE, EXISTING CONTOUR, NEW CONTOUR, FENCE, SILT FENCE, SPOT ELEVATION OR DATUM, SOIL BORING NO. 1.

Table of abbreviations and symbols including: ANGLE, LENGTH, ALUMINUM, ANCHOR BOLT, ABOVE FINISH FLOOR, ALTERNATE, APPROXIMATE, ARCHITECTURAL, AVERAGE, BACK TO BACK, BASEMENT, BEARING, BENCHMARK, BLOCKING, BOARD, BUILDING, CABINET, CANTILEVER, CATCH BASIN, CURB AND GUTTER, CAST IRON PIPE, CONTROL JT, CEILING JST, CENTERLINE, CLOSET, CLEAR ANODIZED, CEILING, CAULKING, CONCRETE MASONRY UNIT, COLUMN, CONCRETE, CONTINUOUS, COURSES, DEEP, DEPTH, DOUBLE, DETAIL, DIAMETER, DIAGONAL, DIMENSION, DOWN, DOWNSPOUT, EACH, EACH WAY, ELECTRICAL, ELEVATION, ELEVATOR, EXISTING, EXPANSION JOINT, EXTERIOR, ELECTRIC WATER COOLER, FIRE EXTINGUISHER, CABINET, FLOOR DRAIN, FACTORY FINISH, FINISH FLOOR ELEVATION, FINISH FLOOR, FOOTING, FIELD VERIFY, FACE OF MASONRY, FACE OF STUD, FACE OF FINISH, GALVANIZED, GAUGE, GLASS, GLAZING, GYPSUM WALL BOARD, GYPSUM.

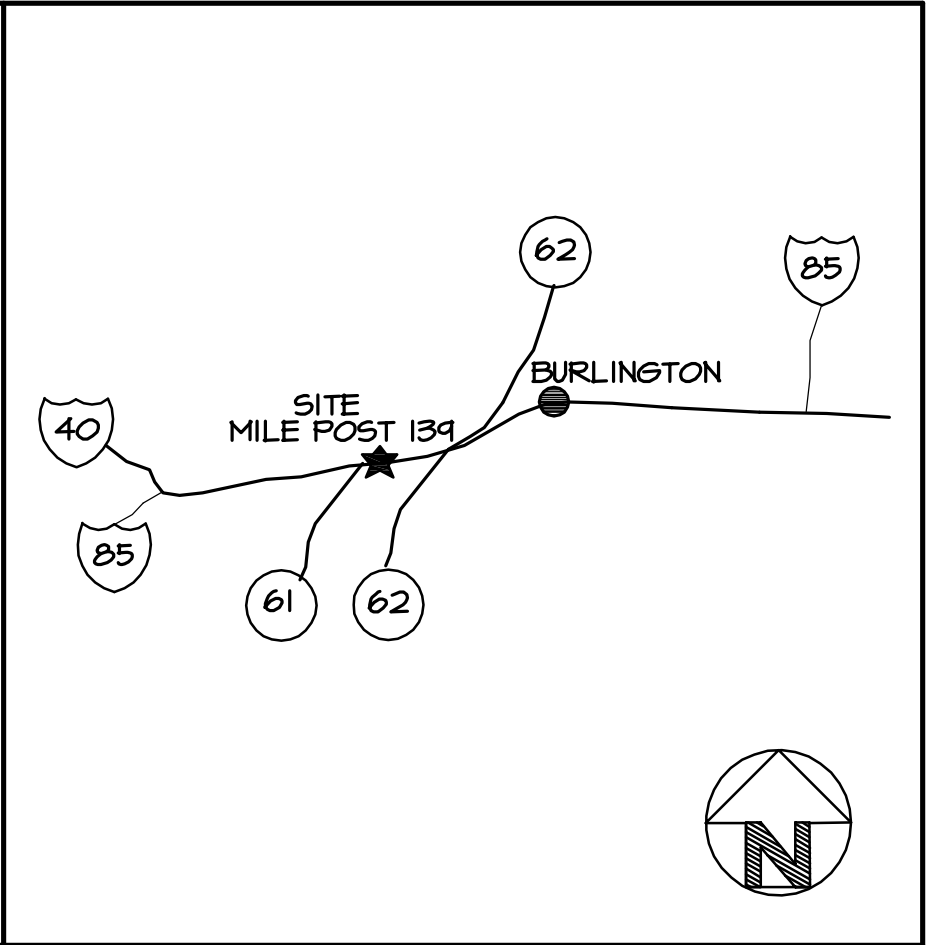
Table of abbreviations and symbols including: HOSE BIB, HOLLOW METAL, HORIZONTAL, HIGH, HEIGHT, INSULATION, INTERIOR, INVERT, JANITOR'S CLOSET, JOIST, KNEE SPACE, LAVATORY, POUND, MANUFACTURER, MANHOLE, MASONRY OPENING, MATERIAL, MAXIMUM, MINIMUM, MOUNTED, MOULDING, NOT IN CONTRACT, NOT TO SCALE, NUMBER, ON CENTER, OPENING, ORIENTED STRAND BOARD.

Table of abbreviations and symbols including: PANEL, PLASTIC LAMINATE, PLATE, PLUMBING, PLYWOOD, PREFABRICATED, POUNDS PER SQ INCH, RISER, ROD, ROOF DRAIN, REFRIGERATOR, REQUIRED, REVERSED, REVISION, SUSPENDED ACOUSTICAL TILE, SUSPENDED CEILING TILE, SANITARY, SECTION, SAFETY GLASS, SHELF, SHELVES, SHEET, SHEATHING, SIMILAR, SPECIFICATION, SQUARE, STAINLESS STEEL, SANITARY SEWER, STANDARD, STEEL, STORAGE.

Table of abbreviations and symbols including: TREAD, TONGUE AND GROOVE, TOILET, TOP OF FOOTING, TOP OF JOIST, TOP OF STEEL, TOP OF WALL, TREATED, TYPICAL, UNFINISHED, UNLESS OTHERWISE NOTED, VERTICAL, WIDE, WIDTH, WITH, WOVEN WIRE FABRIC, WOOD.



LOCATION MAP



VICINITY MAP

BID DOCUMENTS
LISA LARKIN KEEL
REGISTERED ARCHITECT
6195
DESIGNED BY:
FACILITIES DESIGN ARCHITECTS & ENGINEERS
CONSULTANT:
DRAWING TITLE / DESCRIPTION:
TITLE SHEET
PROJECT TITLE:
I-40/I-85 ALAMANCE COUNTY REST AREA VENDING BUILDINGS
SCO ID NO. 14-11287-01A
TIP PROJ. NO. -
WBS NO. 3707.3.23
FEDERAL ID NO. -
ASSET NUMBER: CO.# SITE# BLDG.# 01 013 X
REVISIONS NO. DATE
DATE ISSUED: 4-23-15
DRAWN BY: AS
CHECKED BY: LK
SHEET NO. T1

2012 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: **I-40/I-85 ALAMANCE COUNTY REST AREA VENDING BUILDINGS**
Address: **I-40/I-85 MILE MARKER 139, ALAMANCE COUNTY, NC** Zip Code: **27215**
Proposed Use: **REST AREA VENDING FACILITY- BUSINESS (B)**
Owner/Authorized Agent: **NCDOT** Phone # (**919**) **707** - **4548** E-Mail: **llkeel@ncdot.gov**
Owned By: ☐ City/County ☐ Private ☒ State ☒ State
Code Enforcement Jurisdiction: ☐ City ☐ County ☒ State

LEAD DESIGN PROFESSIONAL: Lisa Keel
DESIGNER FIRM NAME LICENSE # TELEPHONE # E-MAIL
Architectural **NCDOT** **Lisa Keel** **6195** **(919) 707-4550** **llkeel@ncdot.gov**
Civil **Burke Design Group** **Ben Burke** **22038** **919 771-1916** **benburke@nc.rr.com**
Electrical **Burke Design Group** **Ben Burke** **22038** **919 771-1916** **benburke@nc.rr.com**
Fire Alarm **Burke Design Group** **Ben Burke** **22038** **919 771-1916** **benburke@nc.rr.com**
Mechanical **Burke Design Group** **Ben Burke** **22038** **919 771-1916** **benburke@nc.rr.com**
Sprinkler System **Burke Design Group** **Ben Burke** **22038** **919 771-1916** **benburke@nc.rr.com**
Structural **NCDOT** **Michael Mountcastle** **17326** **919 707-4547** **mdmountcastle@ncdot.gov**
Retaining Walls >5' High **NCDOT** **Bob Kopetsky** **1447** **(919) 707-2934** **bkopetsky@ncdot.gov**
Other Landscape **NCDOT** **Bob Kopetsky** **1447** **(919) 707-2934** **bkopetsky@ncdot.gov**

2012 EDITION OF NC CODE FOR: ☒ New Construction ☐ Addition ☐ Upfit
☐ Reconstruction ☐ Alteration ☐ Repair ☐ Renovation
EXISTING: (date) **ORIGINAL USE(S)** (Ch. 3):
CONSTRUCTED: (date) **CURRENT USE(S)** (Ch. 3):
RENOVATED: (date) **PROPOSED USE(S)** (Ch. 3):

BASIC BUILDING DATA
Construction Type: ☐ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A
(check all that apply) ☐ I-B ☐ II-B ☒ V-B
Sprinklers: ☒ No ☐ Partial ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ☒ No ☐ Yes ☐ Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
Fire District: ☒ No ☐ Yes (Primary) **Flood Hazard Area:** ☒ No ☐ Yes
Building Height: (feet) **13'-8"**

Floor	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
6 th Floor			
5 th Floor			
4 th Floor			
3 rd Floor			
2 nd Floor			
Mezzanine			
1 st Floor		2 buildings-526 each	2 buildings-526 each
Basement			
TOTAL		2 buildings-526 each	2 buildings-526 each

ALLOWABLE AREA

Occupancy:
Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business ☐ F-1 Moderate ☐ F-2 Low
Educational ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Factory ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
Hazardous ☐ I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Institutional ☐ Mercantile ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Residential ☒ S-1 Moderate ☐ S-2 Low ☐ High-piled
Storage ☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☐

Accessory Occupancies:
Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business ☐ F-1 Moderate ☐ F-2 Low
Educational ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Factory ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
Hazardous ☐ I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Institutional ☐ Mercantile ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Residential ☒ S-1 Moderate ☐ S-2 Low ☐ High-piled
Storage ☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☐

Incidental Uses (Table 508.2.5):
☐ Furnace room where any piece of equipment is over 400,000 Btu per hour input
☐ Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower
☐ Refrigerant machine room
☐ Hydrogen cutoff rooms, not classified as Group H
☐ Incinerator rooms
☐ Paint shops, not classified as Group H, located in occupancies other than Group F
☐ Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy
☐ Laundry rooms over 100 square feet
☐ Group I-3 cells equipped with padded surfaces
☐ Group I-2 waste and linen collection rooms
☐ Waste and linen collection rooms over 100 square feet
☐ Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power, emergency power or uninterrupted power supplies
☐ Rooms containing fire pumps
☐ Group I-2 storage rooms over 100 square feet
☐ Group I-2 commercial kitchens
☐ Group I-2 laundries equal to or less than 100 square feet
☐ Group I-2 rooms or spaces that contain fuel-fired heating equipment

Special Uses: ☐ 402 ☐ 403 ☐ 404 ☐ 405 ☐ 406 ☐ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412
☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ 421 ☐ 422 ☐ 423 ☐ 424
☐ 425 ☐ 426 ☐ 427
Special Provisions: ☐ 509.2 ☐ 509.3 ☐ 509.4 ☐ 509.5 ☐ 509.6 ☐ 509.7 ☐ 509.8 ☐ 509.9
Mixed Occupancy: ☒ No ☐ Yes Separation: ___ Hrs. Exception: _____
☐ Incidental Use Separation (508.2.5)

This separation is not exempt as a Non-Separated Use (see exceptions).
☐ Non-Separated Use (508.3)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.
☐ Separated Use (508.4) - See below for area calculations
For each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.
$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$
$$+ \dots = \dots \leq 1.00$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503 ¹ AREA	(C) AREA FOR FRONTAGE INCREASE ²	(D) AREA FOR SPRINKLER INCREASE ²	(E) ALLOWABLE AREA OR UNLIMITED ³	(F) MAXIMUM BUILDING AREA ⁴
1	S-1	526	9,000	NOT USED	N/A	9,000	9,000
1	S-1	526	9,000	NOT USED	N/A	9,000	9,000

¹ Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = ___ (F)
b. Total Building Perimeter = ___ (P)
c. Ratio (F/P) = (F/P)
d. W = Minimum width of public way = ___ (W)
e. Percent of frontage increase $I_f = 100 [F/P - 0.25] \times W/30 = ___ (\%)$
² The sprinkler increase per Section 506.3 is as follows:
a. Multi-story building $I_s = 200$ percent
b. Single story building $I_s = 300$ percent
³ Unlimited area applicable under conditions of Section 507.
⁴ Maximum Building Area = total number of stories in the building x E (506.4).
⁵ The maximum area of open parking garages must comply with Table 406.3.5. The maximum area of air traffic control towers must comply with Table 412.1.2.

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type V - B		Type V - B	602.5
Building Height in Feet	40	Feet = H + 20' = N/A	13'-8"	503
Building Height in Stories	2	Stories + 1 = N/A	1	503

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQUIRED	PROVIDED (w/ REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses	>30'	0					
Bearing Walls		0					
Exterior							
North							
East							
West							
South							
Interior		0					
Nonbearing Walls and Partitions		0					
Exterior walls							
North							
East							
West							
South							
Interior walls and partitions		0					
Floor Construction							
Including supporting beams and joists		0					
Roof Construction		0					
Including supporting beams and joists							
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation							
Occupancy Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Tenant Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No ☒ Yes
Exit Signs: ☐ No ☒ Yes
Fire Alarm: ☒ No ☐ Yes
Smoke Detection Systems: ☒ No ☐ Yes ☐ Partial _____
Panic Hardware: ☐ No ☒ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: **A1**
☐ Fire and/or smoke rated wall locations (Chapter 7)
☐ Assumed and real property line locations

☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
☐ Existing structures within 30' of the proposed building
☒ Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.1)
☒ Occupant loads for each area
☒ Exit access travel distances (1016) 250 ft.
☒ Common path of travel distances (1014.3 & 1028.8) 30 ft.
☐ Dead end lengths (1018.4) 20 ft.
☒ Clear exit widths for each exit door
☒ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.1)
☒ Actual occupant load for each exit door
☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
☒ Location of doors with panic hardware (1008.1.10)
☐ Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)
☐ Location of doors with electromagnetic egress locks (1008.1.9.8)
☐ Location of doors equipped with hold-open devices
☐ Location of emergency escape windows (1029)
☐ The square footage of each fire area (902)
☐ The square footage of each smoke compartment (407.4). Smoke barricades <22,500 sf. Max.
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS
(SECTION 1107)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

ACCESSIBLE PARKING
(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESSIBLE	VAN SPACES WITH 13'2" ACCESSIBLE	
ALL EXISTING SPACES TO REMAIN					
TOTAL					

All existing spaces to remain open & accessible during all phases of construction.

DESIGN LOADS:

Importance Factors: Wind (Iw) **1.0**
Snow (Is) **1.0**
Seismic (Is) **1.0**
Live Loads: Roof **20** psf
Mezzanine **100** psf
Floor **100** psf
Ground Snow Load: **15** psf

STRUCTURAL DESIGN

Wind Load: Basic Wind Speed **90** mph (ASCE-7)
Exposure Category **B**
Wind Base Shears (for MWFRS) $V_x = ______ V_y = ______$

SEISMIC DESIGN CATEGORY:

Provide the following Seismic Design Parameters:
Occupancy Category (Table 1604.5) ☐ I ☒ II ☐ III ☐ IV
Spectral Response Acceleration S_s **21.2** % S_1 **8.2** %
Site Classification (Table 1613.5.2) ☐ A ☐ B ☐ C ☒ D ☐ E ☐ F
Data Source: ☐ Field Test ☒ Presumptive ☐ Historical Data

Basic structural system (check one)

☒ Bearing Wall ☐ Dual w/Special Moment Frame
☐ Building Frame ☐ Dual w/Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum

Seismic base shear: $V_x = ______ V_y = ______$
Analysis Procedure: ☐ Simplified ☒ Equivalent Lateral Force ☐ Dynamic
Architectural, Mechanical, Components anchored? ☐ Yes ☐ No

LATERAL DESIGN CONTROL: Earthquake ☐ Wind ☒

SOIL BEARING CAPACITIES:

Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity **1,500** psf
Pile size, type, and capacity _____

SPECIAL INSPECTIONS REQUIRED: ☐ Yes ☒ No

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE	WATERCLOSETS		URINALS	LAVATORIES		SHOWERS/TUBS	DRINKING FOUNTAINS	
	MALE	FEMALE		MALE	FEMALE		REGULAR	ACCESSIBLE
A	EXISTING	-	-	-	-	-	-	-
	NEW	-	-	-	-	-	-	-
	REQUIRED	-	-	-	-	-	-	-

ALL FIXTURES LOCATED IN EXISTING REST AREA BUILDINGS-NO ALTERATIONS WILL BE MADE

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)

ENERGY SUMMARY

ENERGY REQUIREMENTS:

The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Climate Zone: ☐ 3 ☒ 4 ☐ 5

Method of Compliance:

☐ Prescriptive (Energy Code)
☒ Performance (Energy Code) COMCheck
☐ Prescriptive (ASHRAE 90.1)
☐ Performance (ASHRAE 90.1)

THERMAL ENVELOPE

Roof/ceiling Assembly (each assembly)

Description of assembly: **Asphalt shingle roof w/ structural insulated panels**
U-Value of total assembly: **0.025**
R-Value of insulation: **38**
Skylights in each assembly: **NONE**
U-Value of skylight: _____
total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)-

Description of assembly: **Brick Veneer, 1" air space, 1" rigid insulation, R-19 in 2x4 stud wall.**
U-Value of total assembly: **0.04**
R-Value of insulation: **Batt-19.0, Rigid-5.0**
Openings (windows or doors with glazing)
U-Value of assembly: **0.8-glass doors, 0.4 insul. metal door**
Solar heat gain coefficient: **0.40**
projection factor: **0.14**
Door R-Values: **1.25-glass doors, 2.5-insul. metal door**

Walls below grade - NONE

Floors over unconditioned space - NONE

Floors slab on grade

Description of assembly: **Poured in-place concrete over vapor barrier**
U-Value of total assembly: **-**
R-Value of insulation: **-**
Horizontal/vertical requirement: **-**
slab heated: **NO**

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone **4A**
winter dry bulb: **22**
summer dry bulb: **94**

Interior design conditions
winter dry bulb: **72**
summer dry bulb: **75**
relative humidity: **50%**

Building heating load: **8,400 BTU/ Hr**

Building cooling load: **11,800 BTU/ Hr**

Mechanical Spacing Conditioning System

Unitary
description of unit: **1.5 TON DUCTLESS SPLIT SYSTEM HEAT PUMP**
heating efficiency: **SEE EQUIPMENT SCHEDULES**
cooling efficiency: _____
size category of unit: " " "
Boiler
Size category. If oversized, state reason.: **N/A**
Chiller
Size category. If oversized, state reason.: **N/A**

List equipment efficiencies: _____

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance:

Energy Code: ☒ Prescriptive ☐ Performance
ASHRAE 90.1: ☐ Prescriptive ☐ Performance

Lighting schedule (each fixture type)

lamp type required in fixture **SEE LIGHT FIXTURE SCHEDULE**
number of lamps in fixture " " "
ballast type used in the fixture " " "
number of ballasts in fixture " " "
total wattage per fixture " " "
total interior wattage specified vs. allowed (whole building or space by space) **419 VA/ 470 VA**
total exterior wattage specified vs. allowed

Additional Prescriptive Compliance

☐ 506.2.1 More Efficient Mechanical Equipment
☐ 506.2.2 Reduced Lighting Power Density
☒ 506.2.3 Energy Recovery Ventilation Systems
☐ 506.2.4 Higher Efficiency Service Water Heating
☐ 506.2.5 On-Site Supply of Renewable Energy
☐ 506.2.6 Automatic Daylighting Control Systems

BID DOCUMENTS



DESIGNED BY:
FACILITIES DESIGN
ARCHITECTS & ENGINEERS
FACILITIES MANAGEMENT DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
RALEIGH, NORTH CAROLINA 27601
PHONE: 707-4640 FAX: 707-4686



CONSULTANT:

DRAWING TITLE / DESCRIPTION:
BUILDING CODE SUMMARY

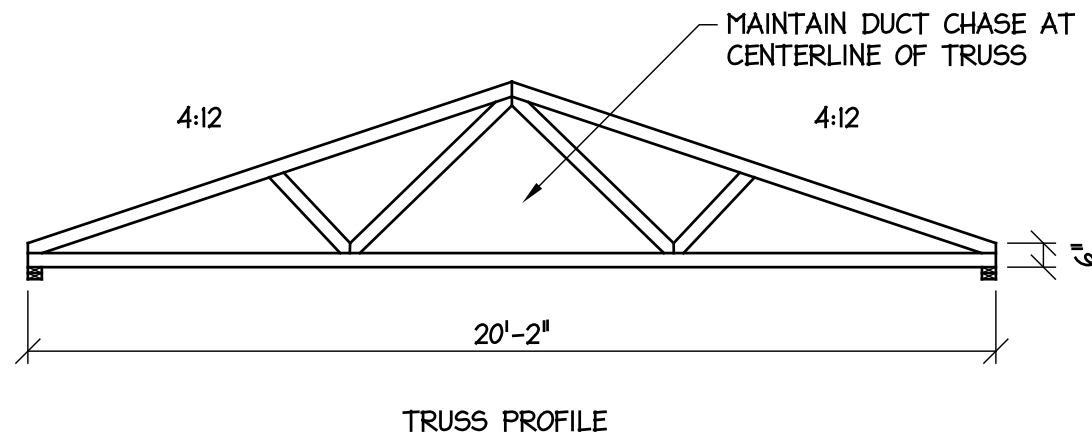
PROJECT TITLE:
I-40/I-85 ALAMANCE COUNTY
REST AREA VENDING BUILDINGS
MILE MARKER 139, BURLINGTON,
ALAMANCE COUNTY, NORTH CAROLINA

SCO ID NO. **14-11287-01A**
TIP PROJ. NO. **-**
WBS NO. **3707.3.23**
FEDERAL ID NO. **-**
ASSET NUMBER:
CO.# **01** SITE.# **013** BLDG.# **X**
REVISIONS
NO. DATE
DATE ISSUED: **4-23-15**
DRAWN BY: **AS**
CHECKED BY: **LUK**
SHEET NO.

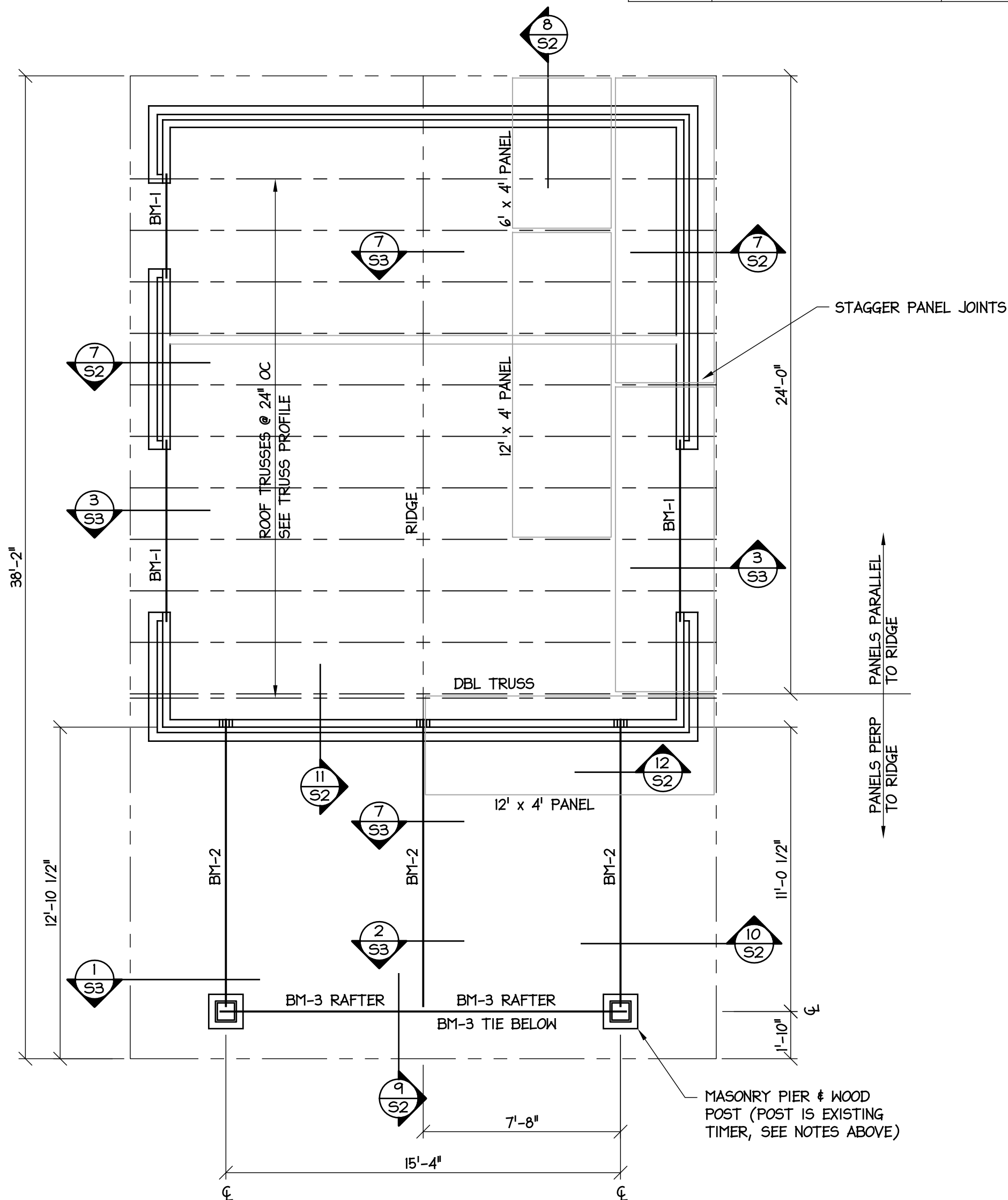
T2

* REUSE OF EXISTING TIMBER:

1. THIS PROJECT ATTEMPTS TO REUSE OLD TIMBERS FROM A LOCAL MILL. THIS MATERIAL WILL BE SUPPLIED BY THE OWNER, HOWEVER THE CONTRACTOR MAY BE RESPONSIBLE FOR TRANSPORTING MATERIAL TO SAWMILL IF REQ'D & TO THE JOB SITE. COORD W/ LOCAL OWNER REP.
2. SOME SIZES GIVEN ON PLANS ARE BASED ON MEASUREMENTS OF A REPRESENTATIVE SAMPLE OF EXISTING TIMBER. VERIFY ACTUAL SIZES PRIOR TO FABRICATION OF BRACKETS & OTHER CONSTRUCTION.
3. REMOVE ALL NAILS & OTHER HARDWARE FROM EXISTING WOOD PRIOR TO USE.
4. CONFIRM SUFFICIENT QUANTITY OF EXISTING MATERIAL. NOTIFY ARCH IF THERE IS INSUFFICIENT MATERIAL OR EXCESSIVE DAMAGE.
5. SEE ARCH FOR REQ'D FINISHES.



BEAM SCHEDULE		
MARK	SIZE	REMARKS
BM-1	(2) 2X10	
BM-2	6X12 TIMBER	SPF #1, NEW TIMBER
BM-3	6X8 TIMBER	SPF #1, NEW TIMBER



NOTES:

1. WALL SHEATHING SHALL BE $\frac{3}{8}$ APA RATED SHEATHING, 32/16 SPAN RATING, EXPOSURE 1, ATTACHED W/ 8D NAILS @ 6" OC ALONG PANEL EDGES & 8" OC AT INTERIOR OF PANEL. BLOCK ALL PANEL EDGES W/ 2X4 BETWEEN WALL STUDS.
2. ROOF TRUSSES & STRUCTURAL INSULATED PANELS SHALL BE DESIGNED FOR ALL LOADS INDICATED ON PLANS & SPECIFICATIONS. SHOP DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NC. SEE TITLE SHEET(S) FOR STRUCTURAL DESIGN CRITERIA.
3. BRIDGING & UPLIFT BRACING SHALL BE INSTALLED PER TRUSS MFR REQUIREMENTS. MFR IS RESPONSIBLE FOR BRACING DESIGN. TEMPORARY BRACING IS THE GC'S RESPONSIBILITY.
4. MINIMUM ROOF DL FOR TRUSS DESIGN SHALL BE 15 PSF.
5. ENGINEERED COMPONENTS SHALL BE DESIGNED FOR WIND PRESSURES SPECIFIED IN NCSCC.

6. ROOF SLOPE = 4:12, UNLESS OTHERWISE NOTED ON PLANS.
7. ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS ARE ABOVE FIRST FINISH FLOOR, REF ELEVATION = +0'-0".
8. SEE LINTEL SCHEDULE FOR MASONRY LINTELS NOT SPECIFIED. SEE ARCH & MECH FOR OPENINGS NOT SHOWN ON STRUCT PLANS.
9. SEE I/SI FOR POST SIZES.
10. WHERE PORCH BEAMS ARE BEVELED, ONLY REMOVE ENOUGH MATERIAL TO PROVIDE BEVEL. DO NOT OVERCUT.
11. ALL DIMENSIONS ARE BASED ON DRESSED LUMBER/TIMBER. USE OF ROUGH CUT MATERIAL WILL REQUIRE APPROVAL BY THE ARCHITECT & ADJUSTMENT OF CONNECTOR DIMENSIONS.



2
SI

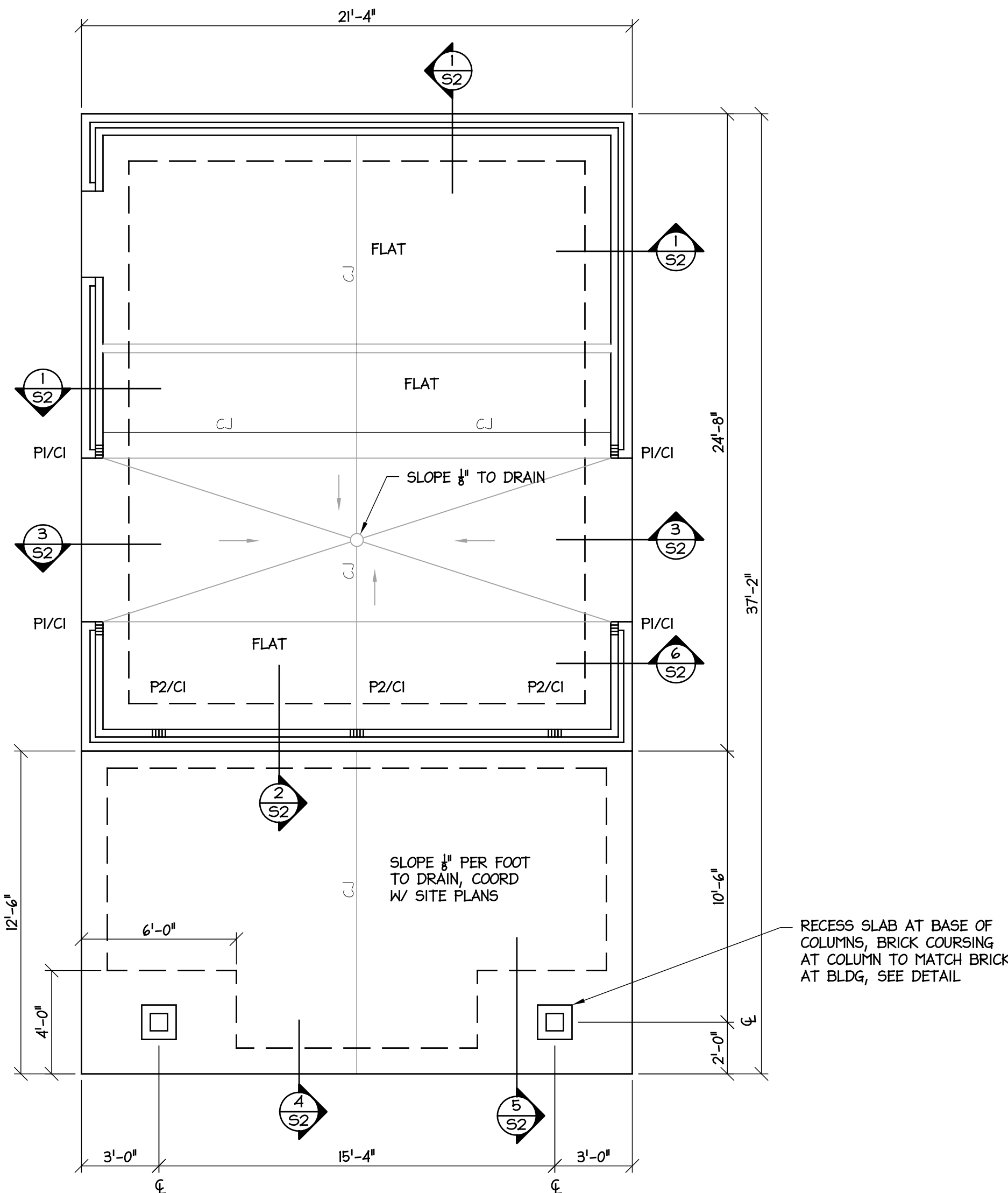
FRAMING PLAN

SCALE: 1/4" = 1'-0"

POST SCHEDULE	
MARK	SIZE
P1	(2) KING STUDS & (2) JACK STUDS
P2	(4) FULL HEIGHT STUDS

CONNECTOR SCHEDULE	
MARK	HOLDOWN & ANCHOR BOLT
C1	HDU2-SDS2.5 & $\frac{3}{8}$ " X 6" EMBED

NOTE: SIMPSON CONNECTORS ARE SHOWN. ALTERNATE CONNECTORS WITH EQUAL LOAD CAPACITY & CORROSION RESISTANCE MAY BE USED.



NOTES:

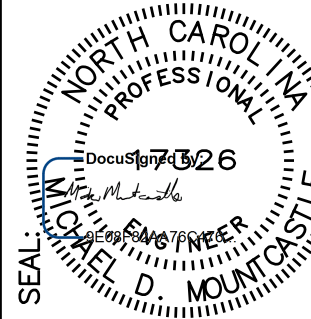
1. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE = 4000 PSI. ADD 5% AIR FOR CONCRETE EXPOSED TO WEATHER.
2. REINFORCEMENT SHALL BE A615, GRADE 60.
3. ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS ARE ABOVE FINISH FLOOR, REF ELEVATION = +0'-0".
4. FLOOR SLAB SHALL BE 4" CONC REINF W/ 6X6 - W1.4 X W1.4 WWR ON 10 MIL VAPOR RETARDER OVER 4" GRANULAR BASE.
5. PROVIDE SMOOTH FINISH FOR INTERIOR SLAB. INTERIOR SLAB WILL BE EXPOSED SEALED CONCRETE, SEE ARCH.
6. PROVIDE BROOMED FINISH ON PORCH SLAB. SEE ARCH FOR SEALANT.
7. SEE ARCH PLANS FOR FLOOR FINISHES & DIMENSIONS NOT SHOWN. SEE ARCH OR SITE PLANS FOR EXTERIOR CONCRETE.
8. CJ DENOTES SLAB CONTROL JOINT. SAW JOINTS MIN $\frac{1}{4}$ SLAB THICKNESS.
9. PX & CX DENOTE POST & CONNECTOR, SEE SCHEDULES THIS SHEET.
10. PRESUMPTIVE SOIL CAPACITY IS SHOWN ON CODE SUMMARY SHEET. SOIL INVESTIGATION BY OWNER IS PENDING.



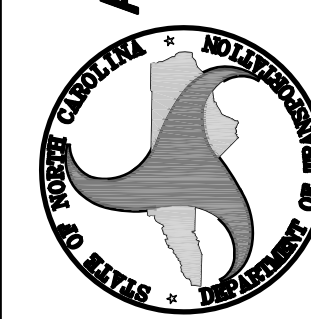
1
SI

FOUNDATION PLAN

SCALE: 1/4" = 1'-0"



FACILITIES DESIGN
Architects & Engineers
Facilities Management Division
NC Department of Transportation
1 South Wilmington Street
Raleigh, North Carolina 27601
Tel. 919-707-4540 Fax 919-715-0399



CONSULTANT:

SHEET TITLE:

FDN PLAN
FRAMING PLAN

PROJECT: **Alamance County Vending and Site Improvements**
HIGHWAY DIVISION 7
ALAMANCE COUNTY, NORTH CAROLINA

SCO ID NO.
14-11287-01A

REVISIONS
NO. DATE

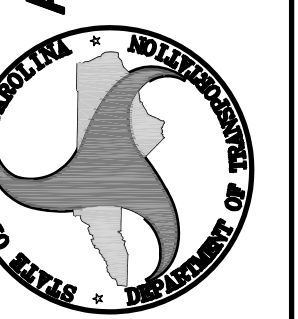
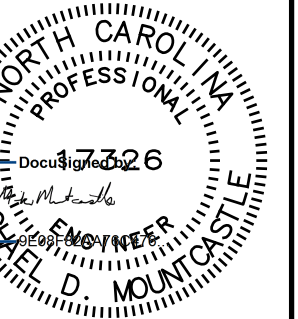
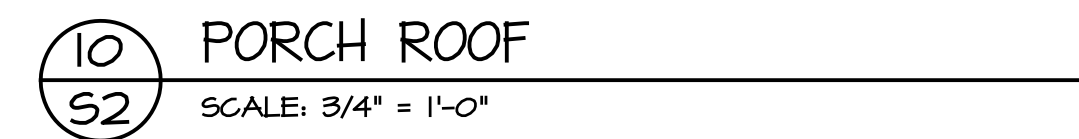
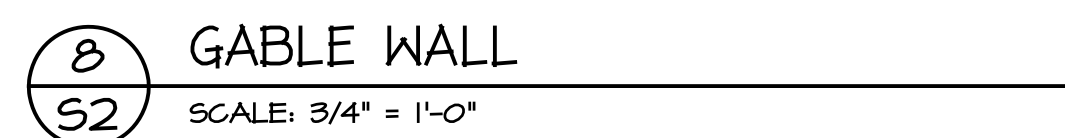
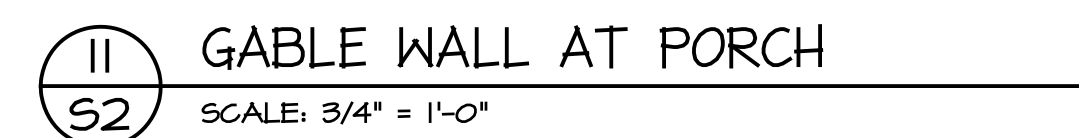
DATE: 4/23/15

DRAWN BY: MDM

CHECKED BY: MDM

SHEET NO.

S1
OF



A. GENERAL

- ## B. FOUNDATION

- ### C. CONCRETE

- #### D. MASONRY

- ### E. STRUCTURAL STEEL

- F. WOOD

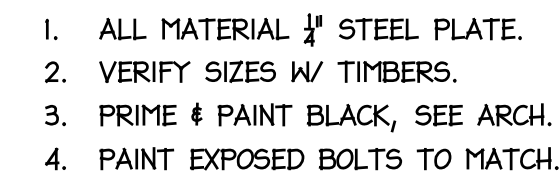
- | | E (psi) | Fb (psi) | Fv (psi) | Fc (psi) |
|-----|-----------|----------|----------|----------|
| LVL | 1,900,000 | 2600 | 285 | n/a |
| PSL | 1,800,000 | 2400 | 190 | 2500 |

- | OPENING | STEEL LINTEL | MIN BEARING |
|----------------|------------------------|-------------|
| 0'-0" to 1'-4" | PLATE 3/8 X 3-1/2 | 8" |
| 1'-4" to 4'-0" | L 3-1/2 X 3 1/2 X 5/16 | 8" |
| 4'-0" to 6'-0" | L 4 X 3 1/2 X 5/16 LLV | 8" |
| 6'-0" to 8'-0" | L 5 X 3 1/2 X 5/16 LLV | 8" |

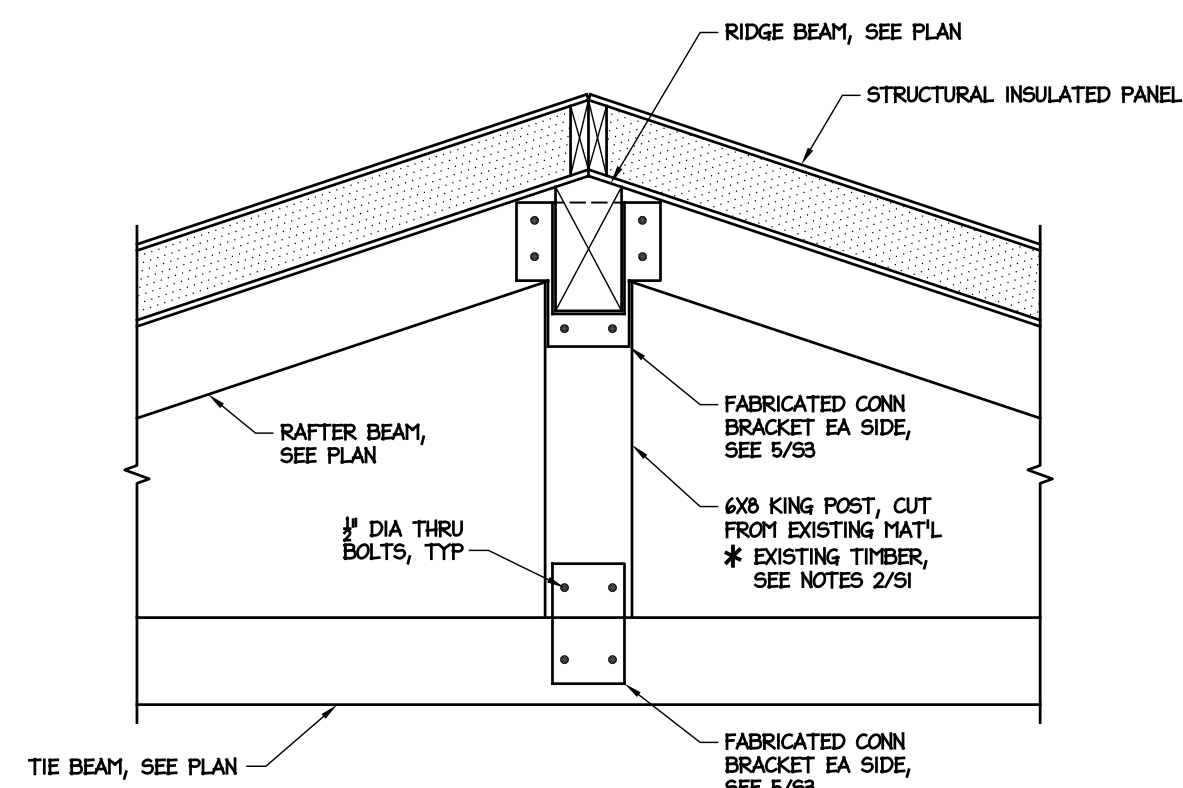
SIZES ABOVE ARE PER 4" OF WALL THICKNESS

- 7 PANEL CONN AT RIDGE
S3 SCALE: 3/4" = 1'-0"

SCALE: 1" = 1'-0"



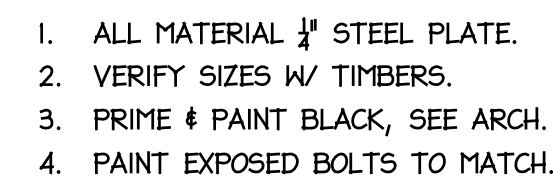
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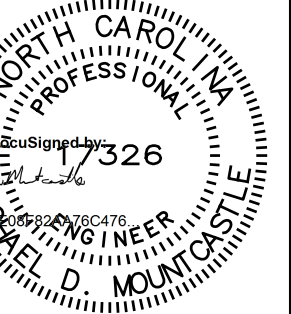
SCALE: 3/4" = 1'-0"



SCALE: 1" = 1'-0"



SCALE: 3/4" = 1'-0"



Architects & Engineers
Facilities Management Division
NC Department of Transportation
1 South Wilmington Street
Raleigh, North Carolina 27601
Tel: 919-707-4540 Fax: 919-715-0399



DETAILS

Alamance County Vending and Site Improvements HIGHWAY DIVISION 7 ALAMANCE COUNTY, NORTH CAROLINA

SCO ID NO.
4-11287-01A

DATE

4/23/15





IN BY:	MDM
	MDM

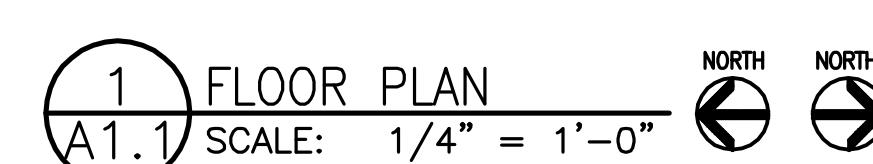
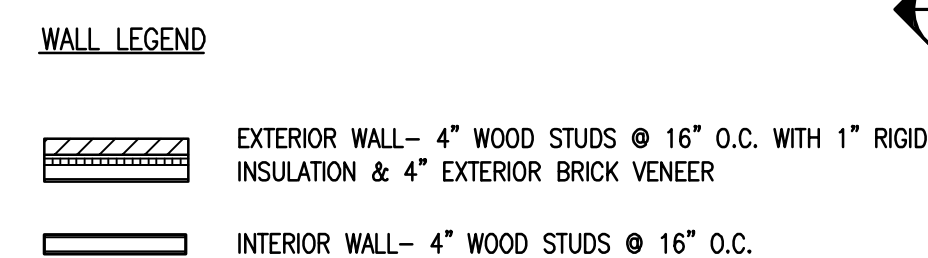
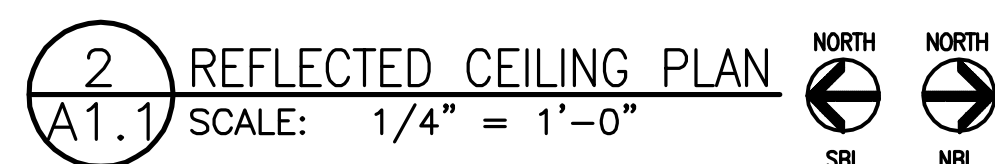
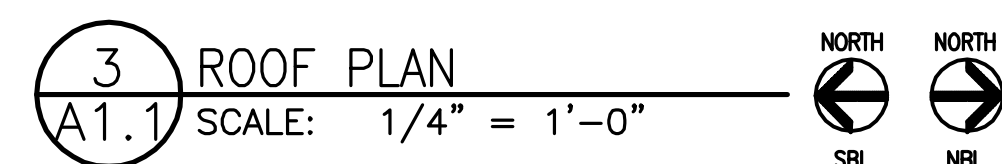
PREPARED BY:	MDM
UNIT NO.	

22

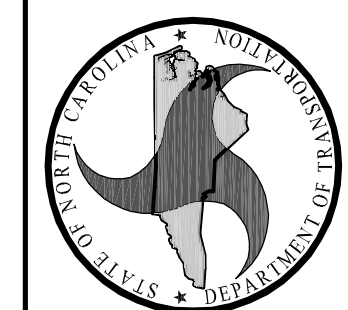
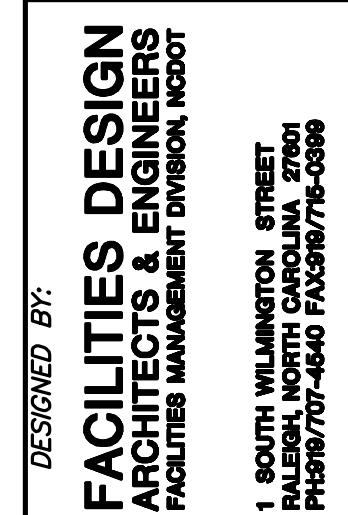
33



LEGEND	
SYMBOL	DESCRIPTION
	48" STANDARD STRIP LIGHT WITH WIRE GUARD
	6" LED CAN LIGHT
	WAREHOUSE SHADE BARN LIGHT
	EXHAUST AIR GRILL



1. CONTRACTOR SHALL CAULK ALL INTERIOR FLOOR CONTROL AND EXPANSION JOINTS AT FLOORS BEFORE SEALING. REFERENCE STRUCTURAL DRAWINGS FOR LOCATION.
2. CONTRACTOR SHALL PROVIDE GYPSUM BOARD CONTROL JOINTS AS INDICATED IN MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES. DO NOT SCALE DRAWINGS.
4. ALL WALL DIMENSIONS ARE TO THE FACE OF STUD (F.O.S.), UNLESS OTHERWISE NOTED OR DETAILED.
5. ALL EXTERIOR WALL STUD FRAMING IS 2x4 @ 16" O.C..
6. PROVIDE ACOUSTICAL SOUND BATTS IN ALL INTERIOR STUD WALLS.
7. REFER TO DETAIL DWGS FOR ADDITIONAL DIMENSIONS AND WALL TYPE DESIGNATIONS.



CONSULTANT:

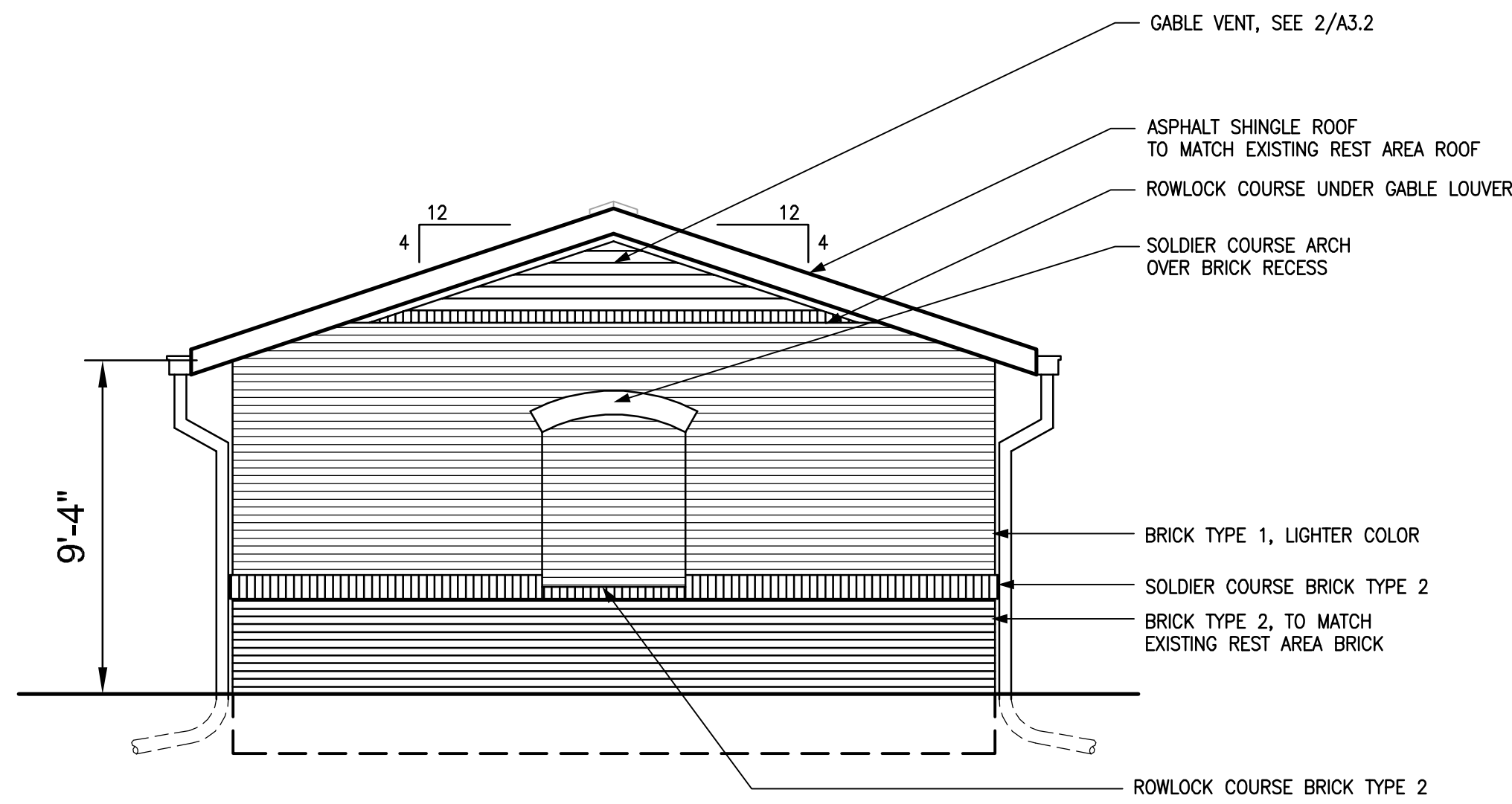
DRAWING TITLE / DISCUSSION:
FLOOR PLAN,
REFLECTED CEILING PLAN,
ROOF PLAN

PROJECT TITLE:
**-40/1-85 ALAMANCE COUNTY
REST AREA VENDING BUILDINGS**

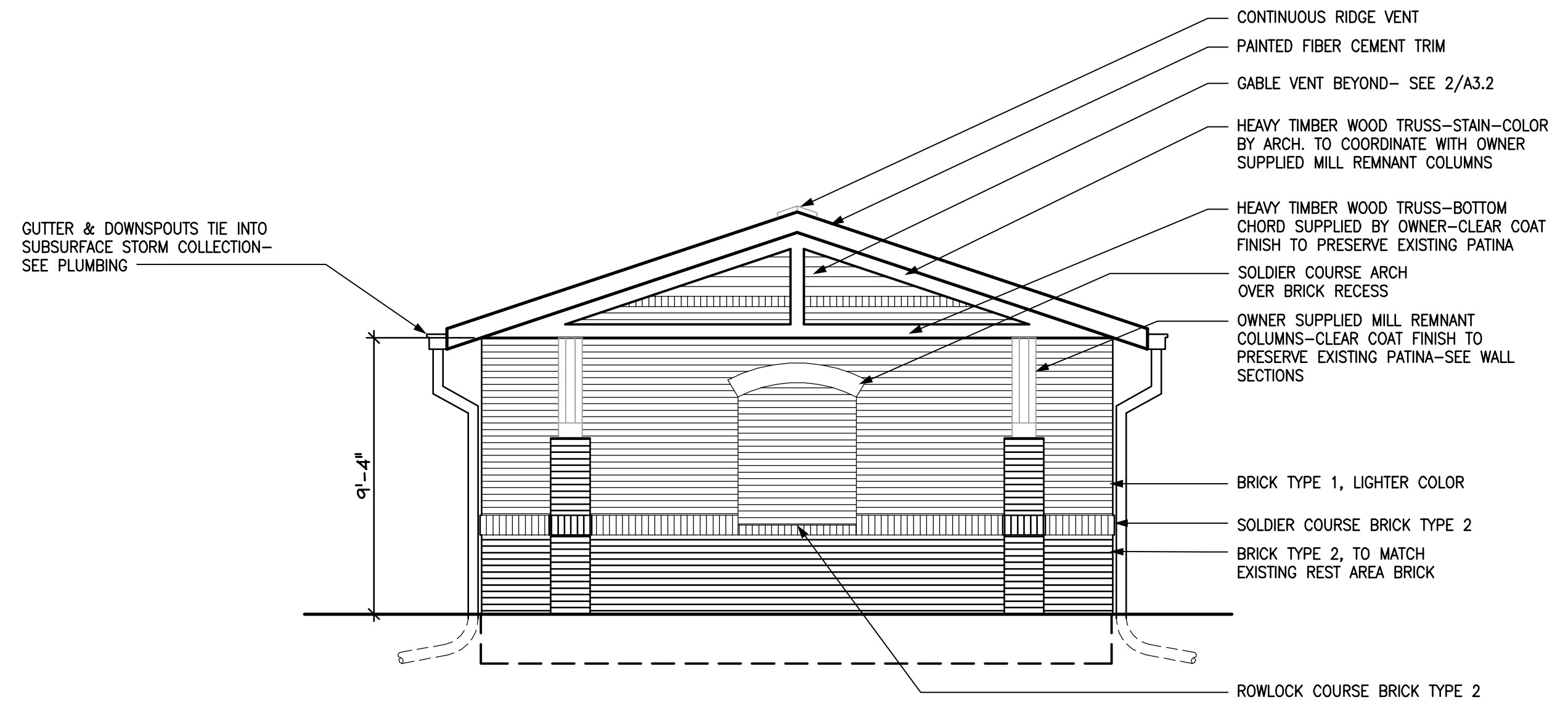
MILE MARKER 139, BURLINGTON,
ALAMANCE COUNTY, NORTH CAROLINA

SCO ID NO.	14-11287-01A
TIP PROJ. NO.	-
WBS NO.	3707.3.23
FEDERAL ID NO.	-
ASSET NUMBER:	
CO. #	SITE # BLDG.
01	013 - X
REVISIONS NO.	DATE
DATE ISSUED: 4-23-15	
DRAWN BY: AS	
CHECKED BY: LLK	
SHEET NO.	

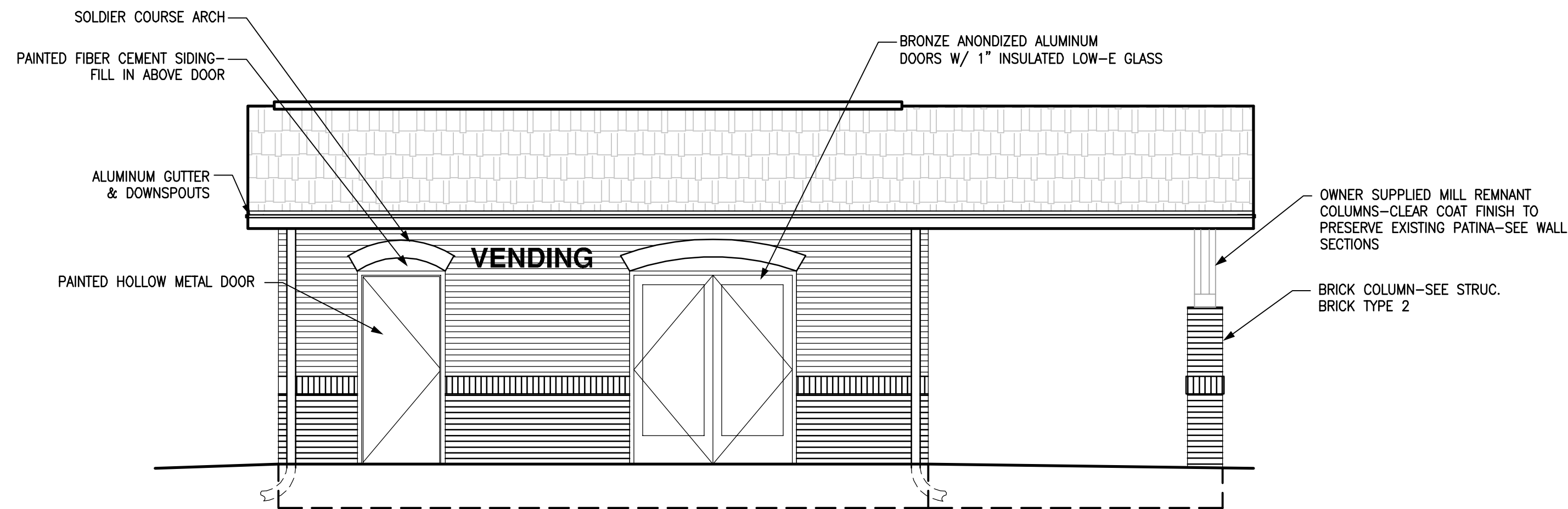
A1.1



4 EAST ELEVATION
A2.1 SCALE: 1/4" = 1'-0"



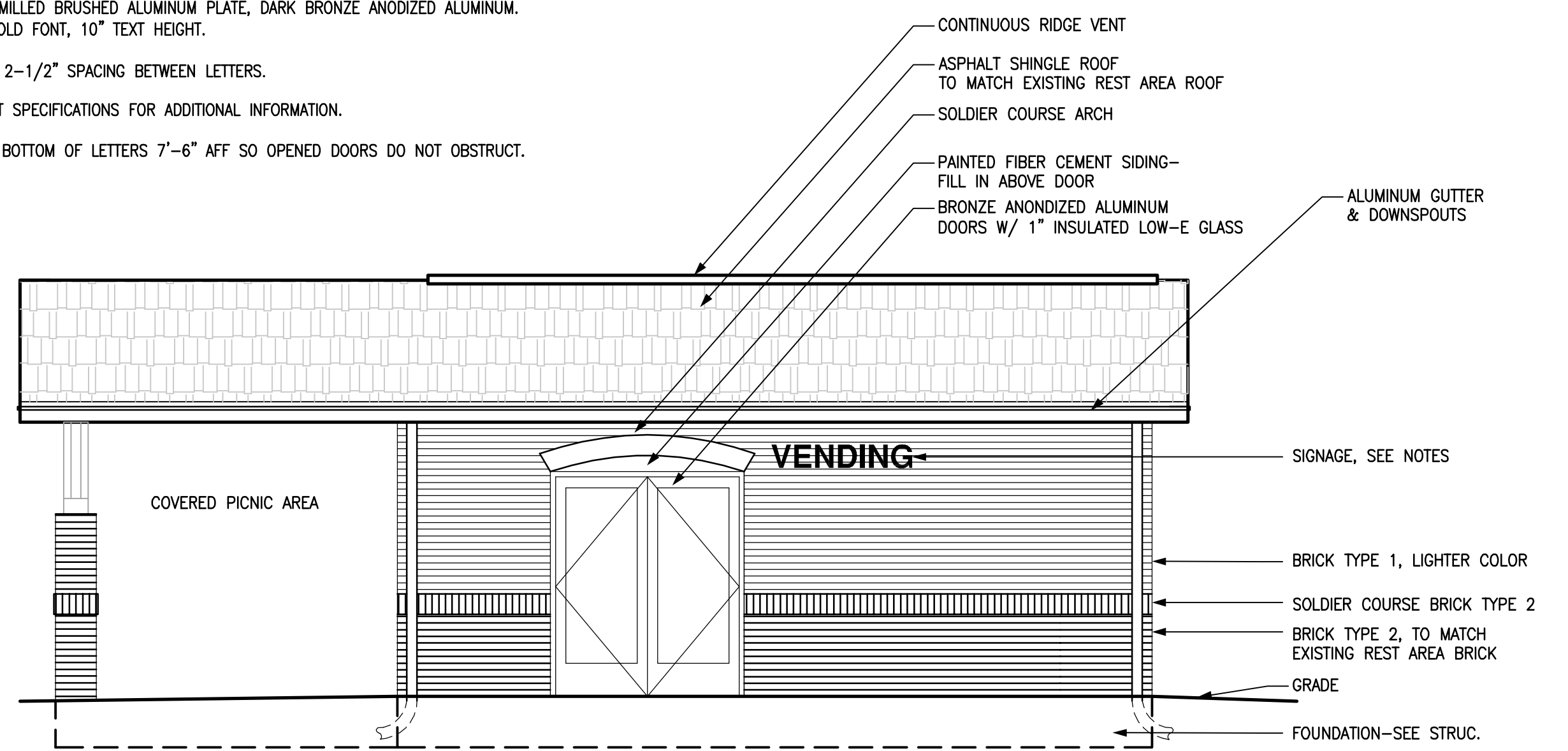
3 WEST ELEVATION
A2.1 SCALE: 1/4" = 1'-0"



2 NORTH ELEVATION
A2.1 SCALE: 1/4" = 1'-0"

SIGNAGE NOTES:

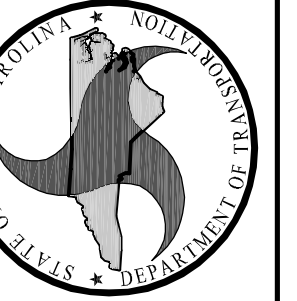
- SIGNAGE SHALL COMPLY WITH ICC A117.1-2009, CH. 7.
- INDIVIDUAL METAL LETTERS :
1/4" THICK MILLED BRUSHED ALUMINUM PLATE, DARK BRONZE ANODIZED ALUMINUM.
HELVETICA BOLD FONT, 10" TEXT HEIGHT.
- MOUNT WITH 2-1/2" SPACING BETWEEN LETTERS.
- SEE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- MOUNT WITH BOTTOM OF LETTERS 7'-6" AFF SO OPENED DOORS DO NOT OBSTRUCT.



1 SOUTH ELEVATION
A2.1 SCALE: 1/4" = 1'-0"



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CONSULTANT:

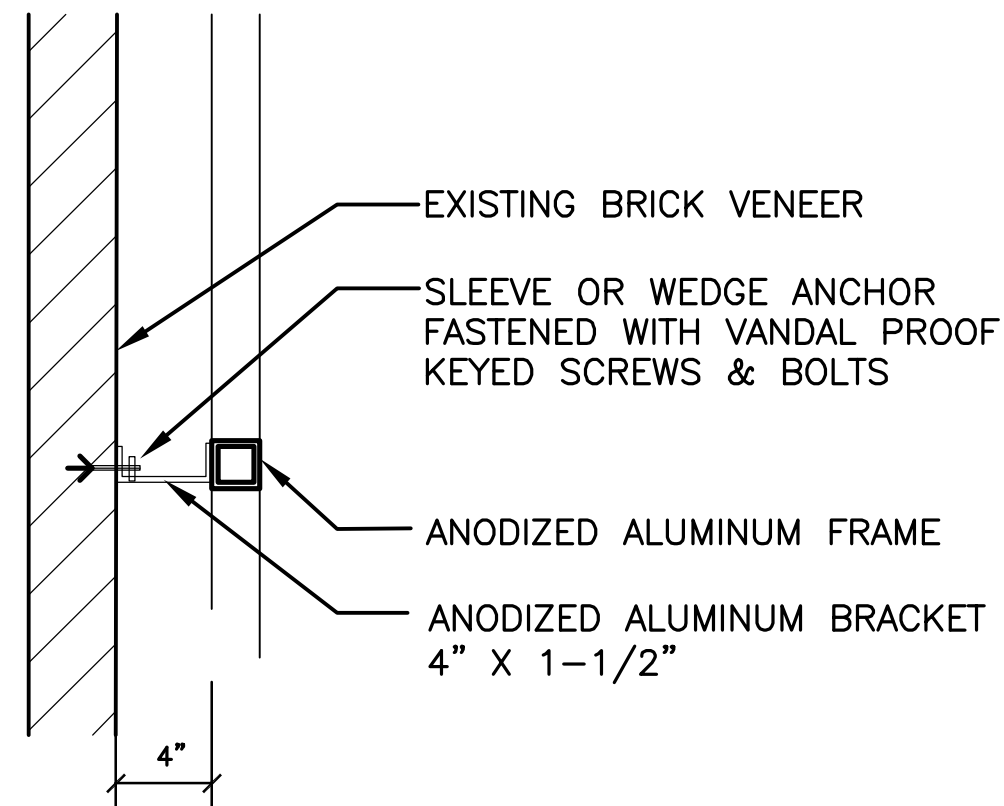
EXTERIOR ELEVATIONS

PROJECT TITLE:
**I-40/I-85 ALAMANCE COUNTY
REST AREA VENDING BUILDINGS**

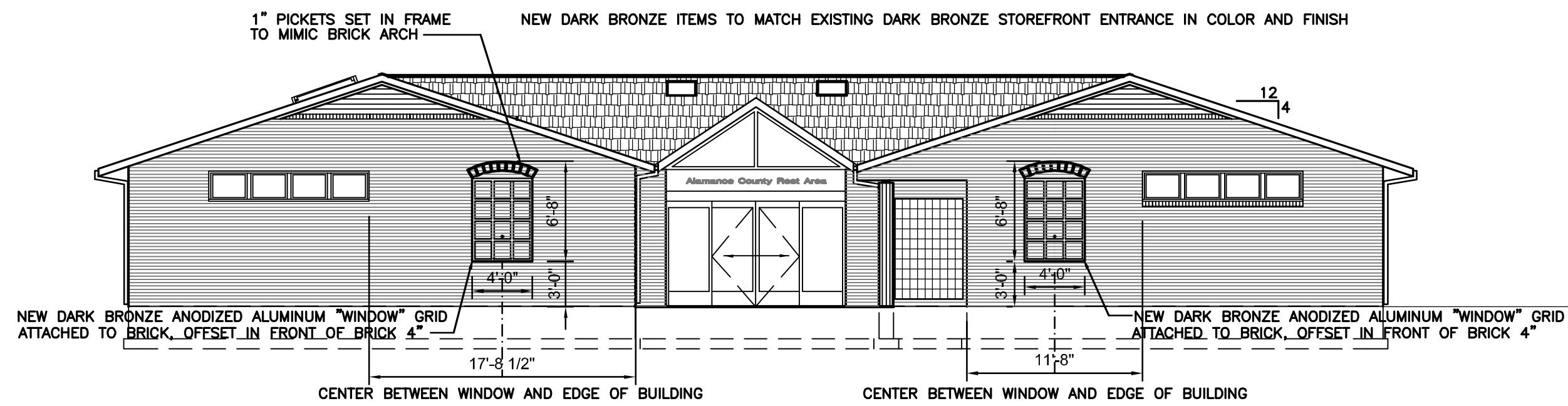
MILE MARKER 139, BURLINGTON,
ALAMANCE COUNTY, NORTH CAROLINA

SCO ID NO.	14-11287-01A
TIP PROJ. NO.	-
WBS NO.	3707.3.23
FEDERAL ID NO.	-
ASSET NUMBER: CO. # SITE # BLDG. #	01 013 X
REVISIONS NO. DATE	
DATE ISSUED:	4-23-15
DRAWN BY:	AS
CHECKED BY:	LUK
SHEET NO.	

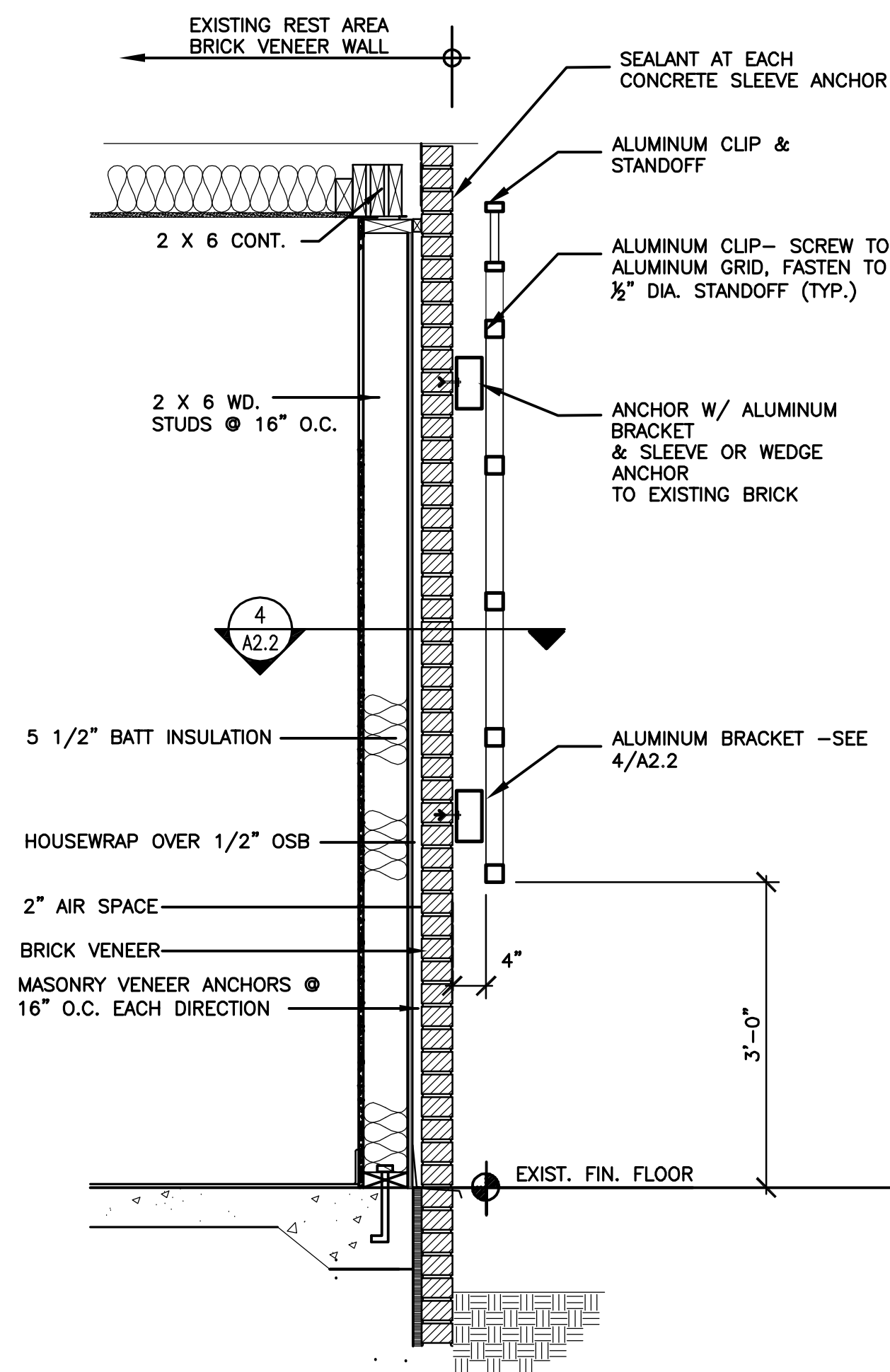
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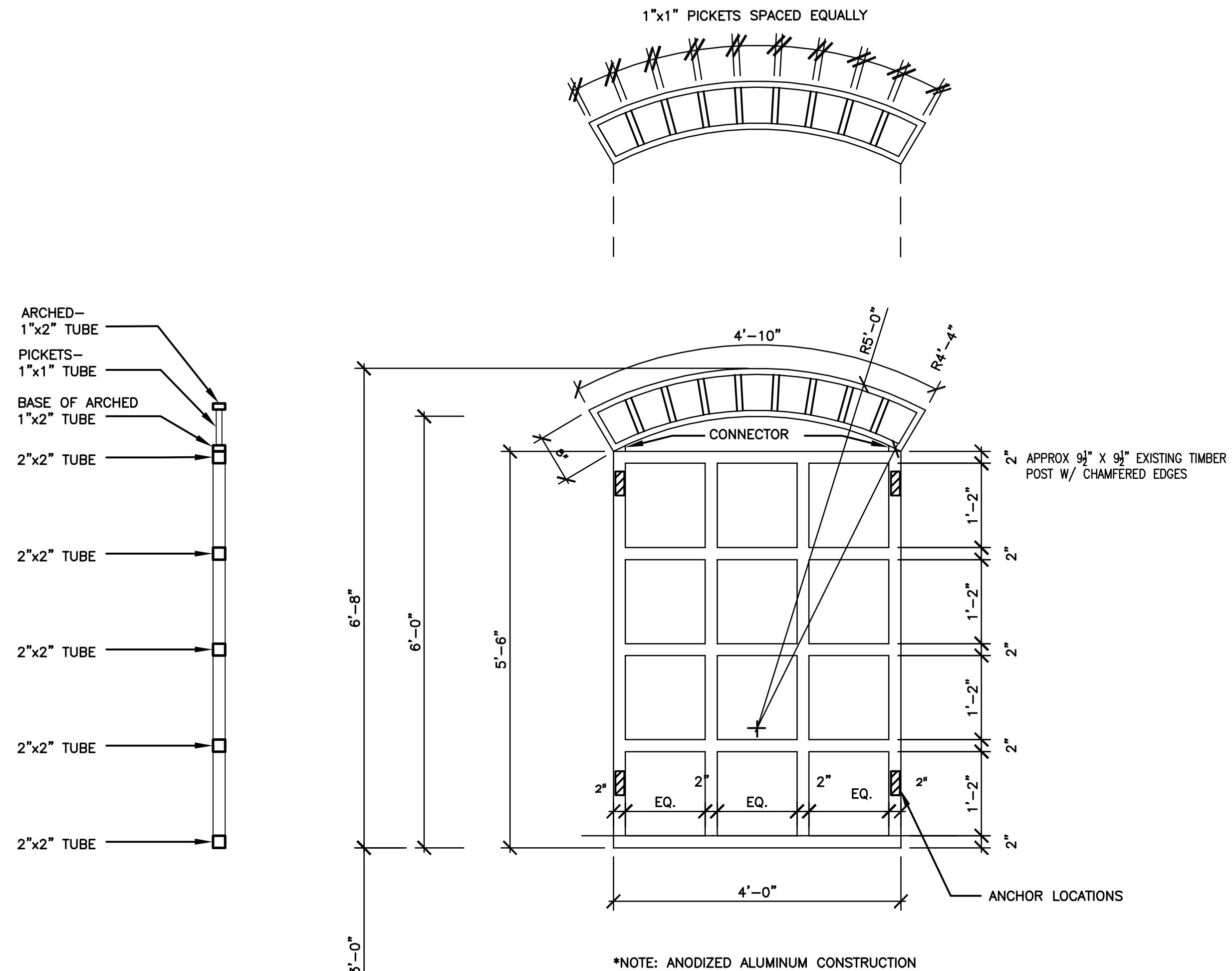
4
A2.2 DETAIL-ALUM. GRID ATTACHMENT
SCALE: 1 1/2" = 1'-0"



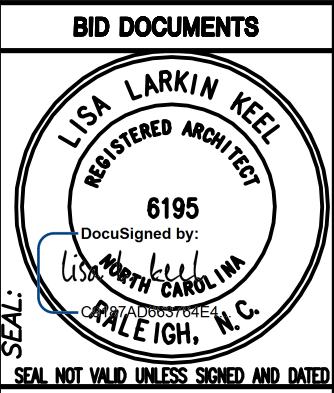
3
A2.2 EXISTING REST AREA ELEVATION-TO SHOW LOCATION OF NEW ALUMINUM "FAUX" WINDOWS
SCALE: 1/8" = 1'-0" (2) FAX WINDOWS AT EACH EXISTING REST AREA



2
A2.2 ALUMINUM GRID ("FAUX" WINDOW) ATTACHMENT DETAIL
SCALE: 3/4" = 1'-0"



1
A2.2 "FAUX" WINDOW ELEVATION & DETAIL
SCALE: 3/4" = 1'-0"



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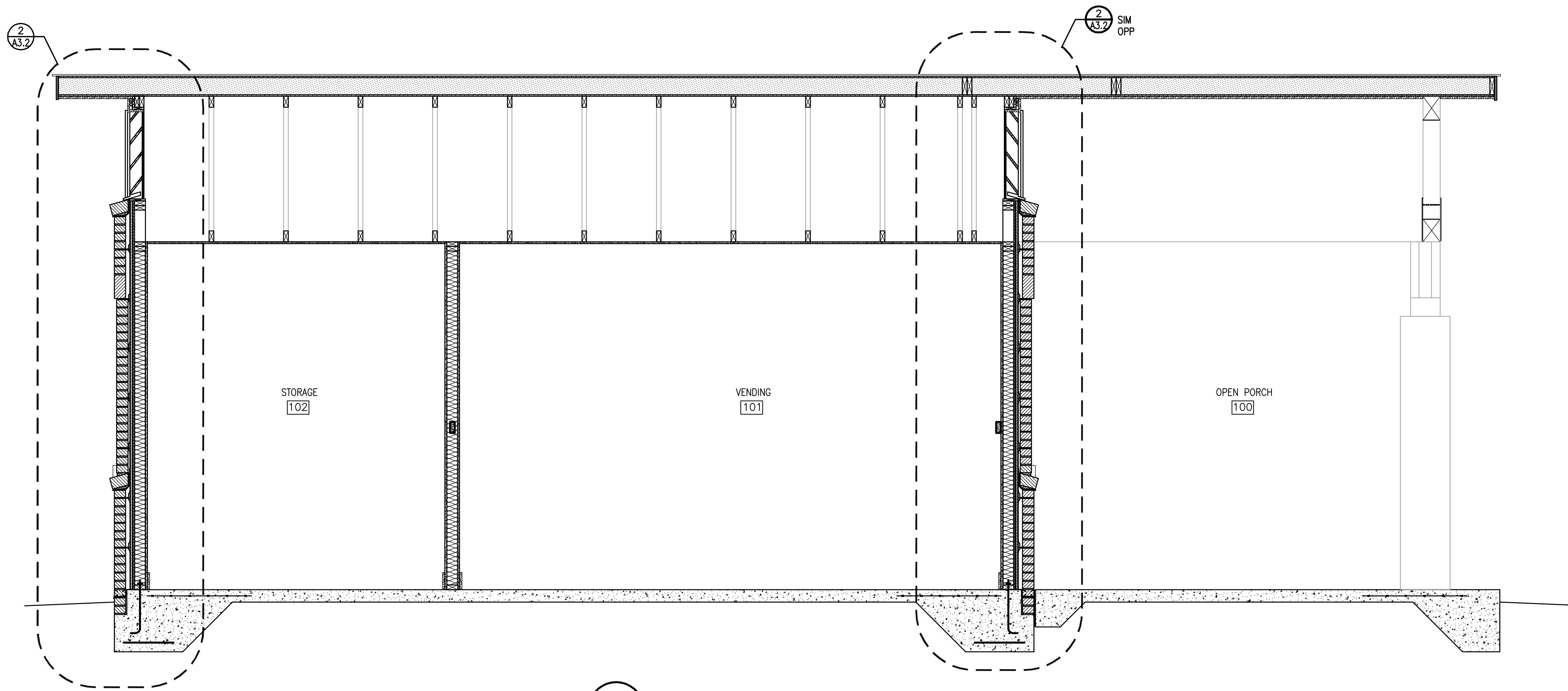
CONSULTANT:

EXTERIOR ELEVATIONS & DETAILS

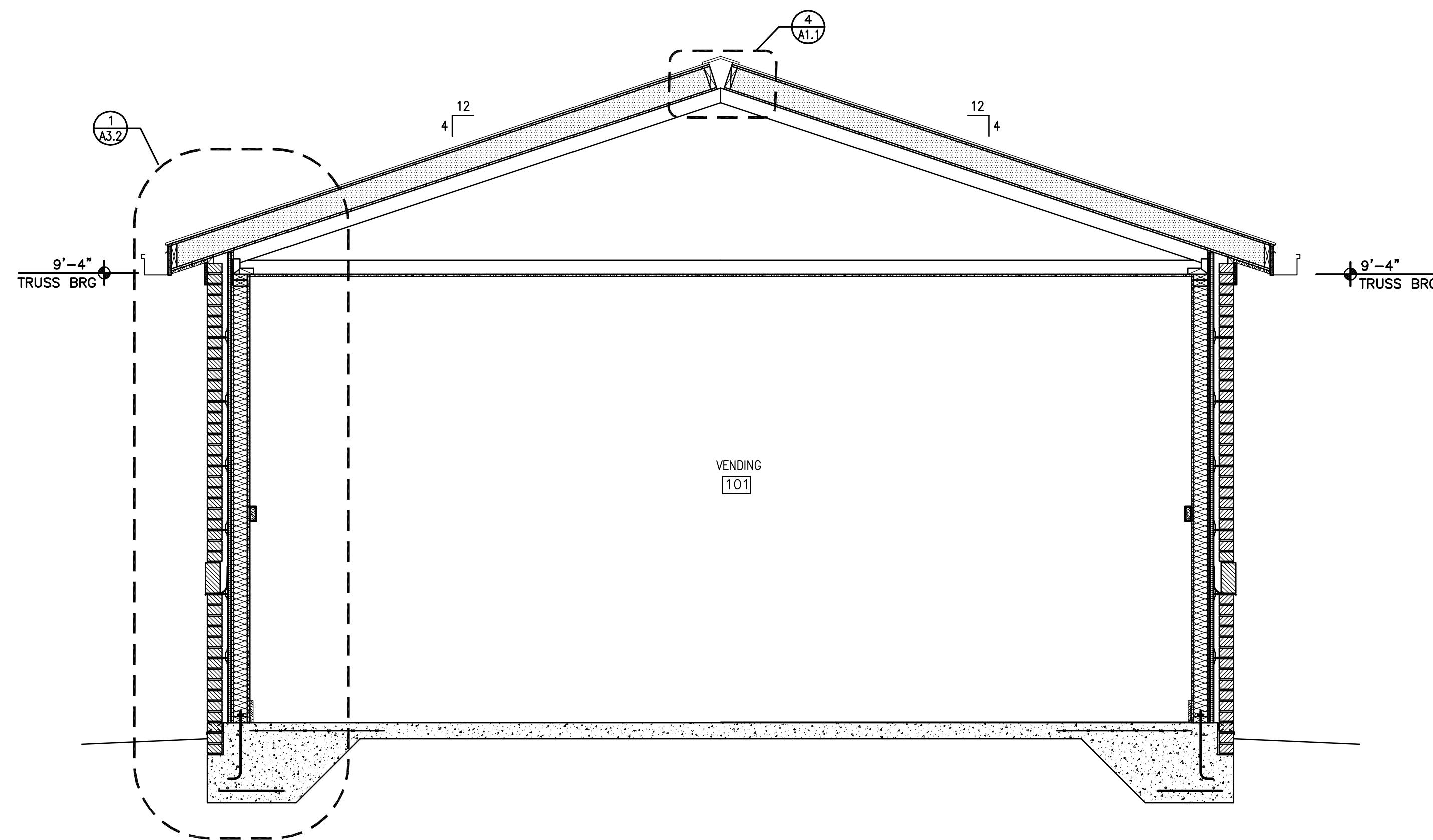
PROJECT TITLE:
I-40/I-85 ALAMANCE COUNTY
REST AREA VENDING BUILDINGS
MILE MARKER 139, BURLINGTON,
ALAMANCE COUNTY, NORTH CAROLINA

SCO ID NO.	14-11287-01A
TIP PROJ. NO.	-
WBS NO.	3707.3.23
FEDERAL ID NO.	-
ASSET NUMBER:	
CO. #	01
SITE #	013
BLDG. #	X
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NO.	DATE
DATE ISSUED:	4-23-15
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CHECKED BY:	LUK
SHEET NO.	

A2.2

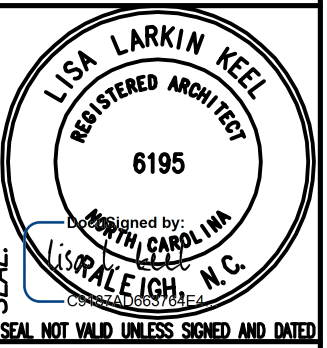


2 LONGITUDINAL BUILDING SECTION
A3.1 SCALE: 1/2" = 1'-0"



1 LATERAL BUILDING SECTION
A3.1 SCALE: 1/2" = 1'-0"

BID DOCUMENTS



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CONSULTANT:

BUILDING SECTIONS

PROJECT TITLE:
**I-40/I-85 ALAMANCE COUNTY
REST AREA VENDING BUILDINGS**

MILE MARKER 139, BURLINGTON,
ALAMANCE COUNTY, NORTH CAROLINA

SCO ID NO. 14-11287-01A
TIP PROJ. NO. -
WBS NO. 3707.3.23
FEDERAL ID NO. -

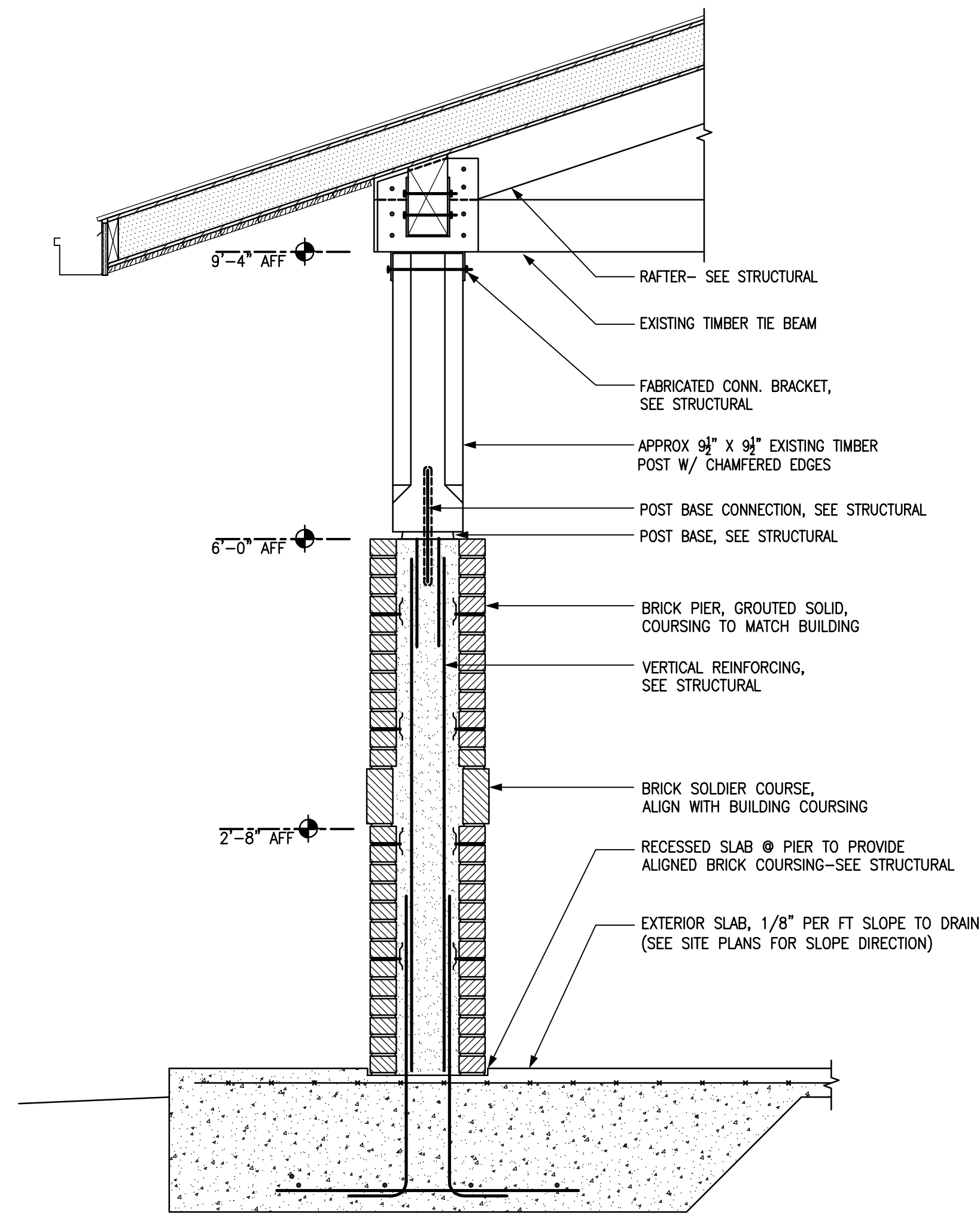
ASSET NUMBER:
CO. # SITE # BLDG. #
01 013 X

REVISIONS
NO. DATE

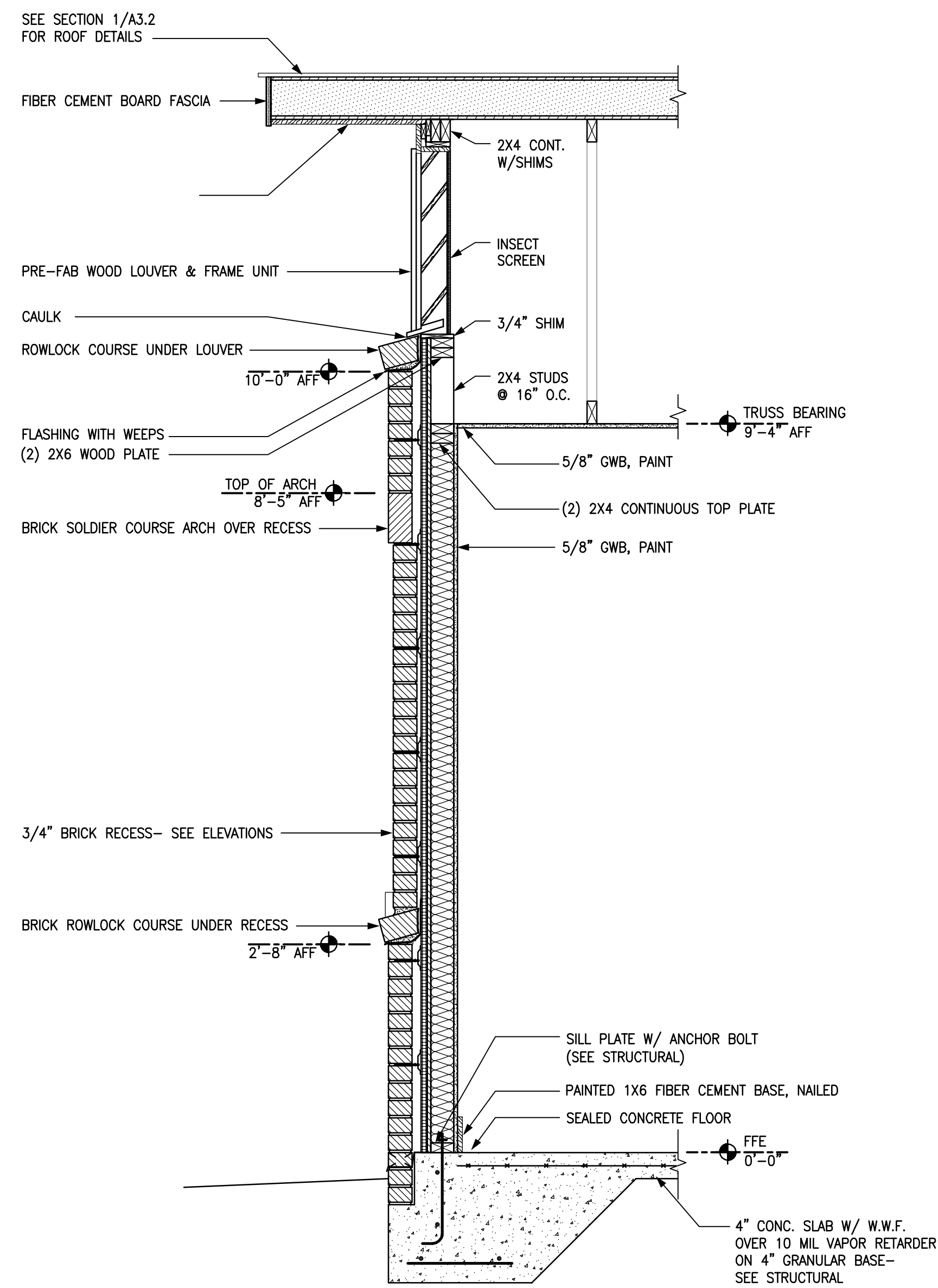
DATE ISSUED: 4-23-15
DRAWN BY: AS
CHECKED BY: ULK

SHEET NO.

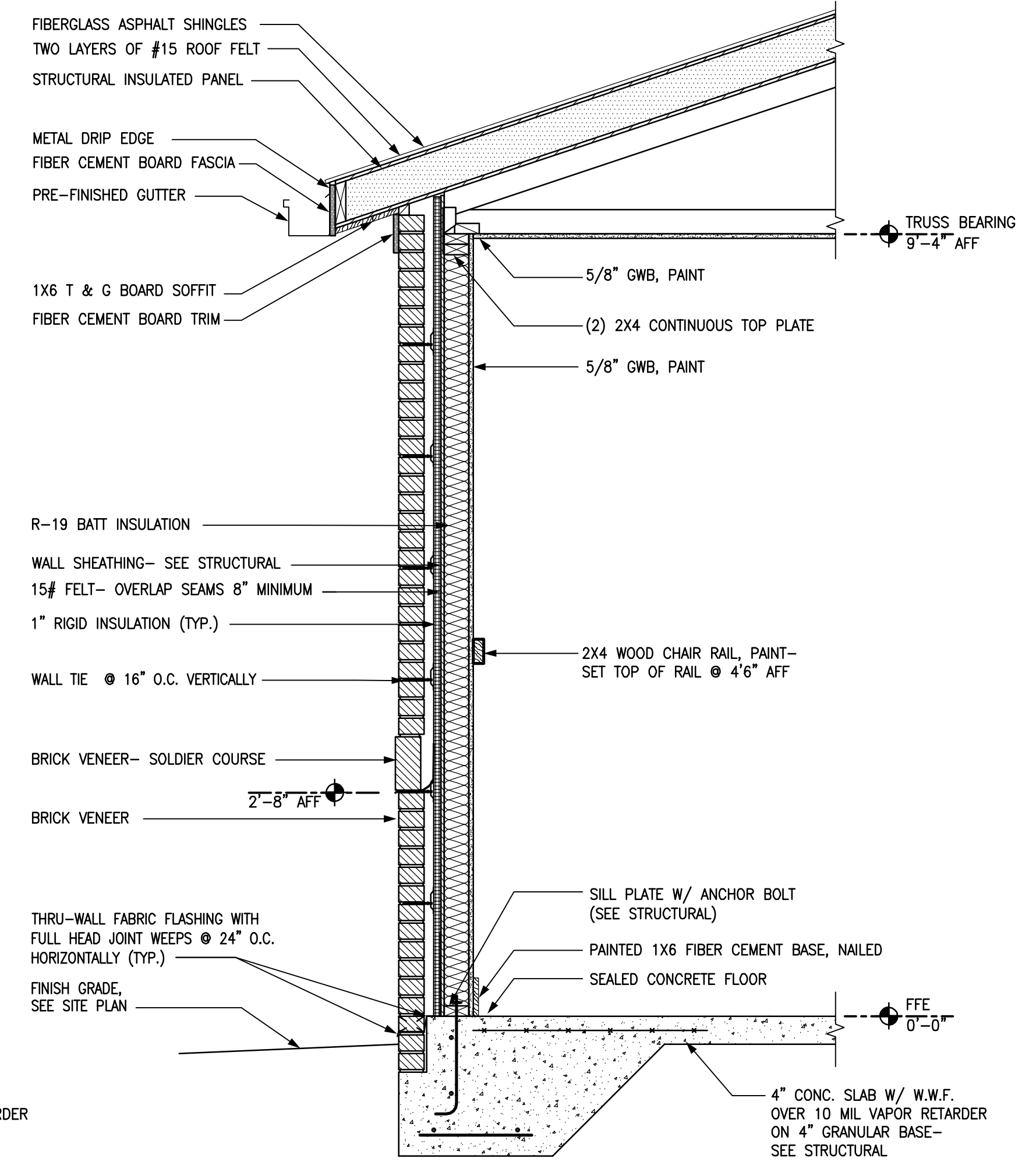
A3.1



3 SECTION @ PORCH COLUMN
A3.2 SCALE: 3/4" = 1'-0"



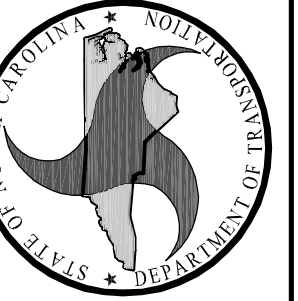
2 WALL SECTION
A3.2 SCALE: 3/4" = 1'-0"



1 WALL SECTION
A3.2 SCALE: 3/4" = 1'-0"



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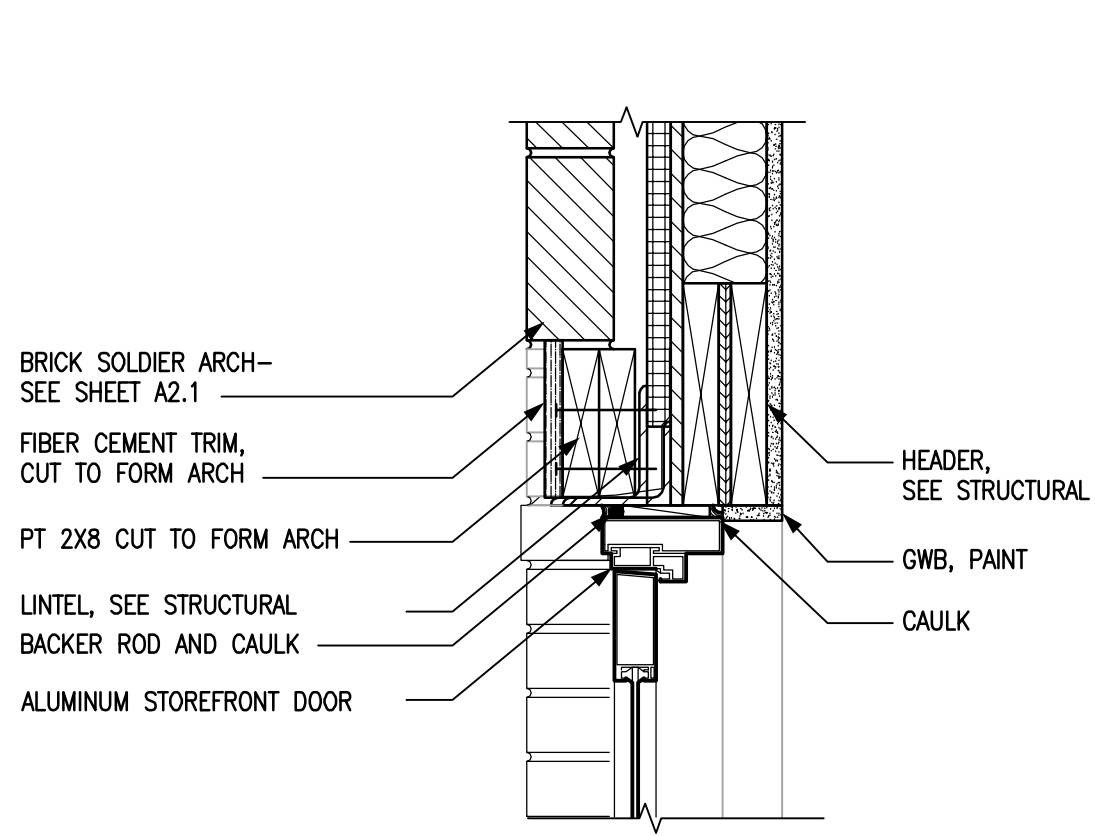
CONSULTANT:

WALL SECTIONS & DETAILS

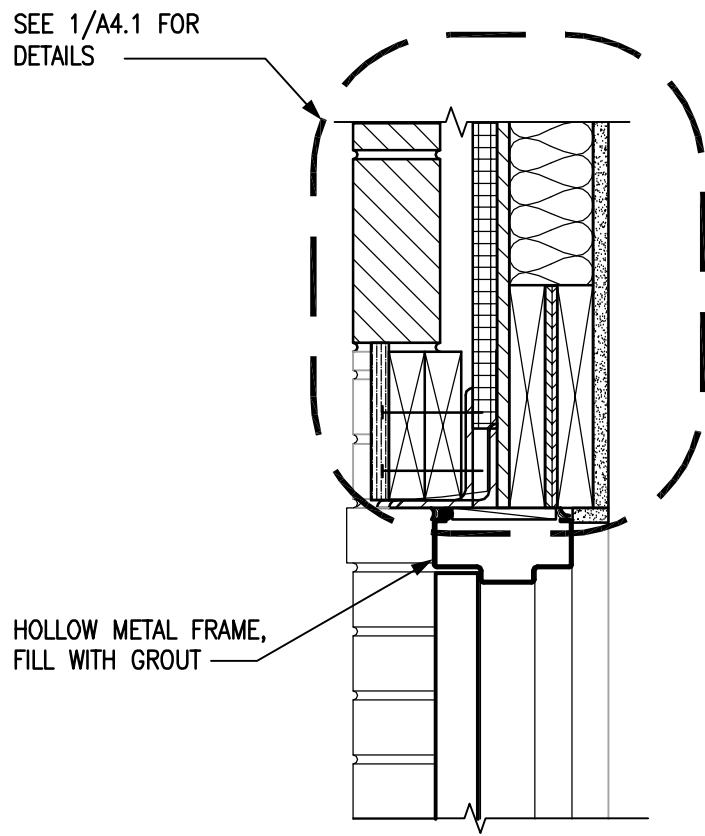
PROJECT TITLE:
**I-40/I-85 ALAMANCE COUNTY
REST AREA VENDING BUILDINGS**
MILE MARKER 139, BURLINGTON,
ALAMANCE COUNTY, NORTH CAROLINA

PROJ. ID NO.	14-11287-01A		
PROJ. NO.	-		
BS NO.	3707.3.23		
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ASSET NUMBER:			
CO.#	SITE.#	BLDG.#	
01	013	X	
REVISIONS			
NO.	DATE		
DATE ISSUED: 4-23-15			
DRAWN BY: AS			
CHECKED BY: LLK			
SHEET NO.			

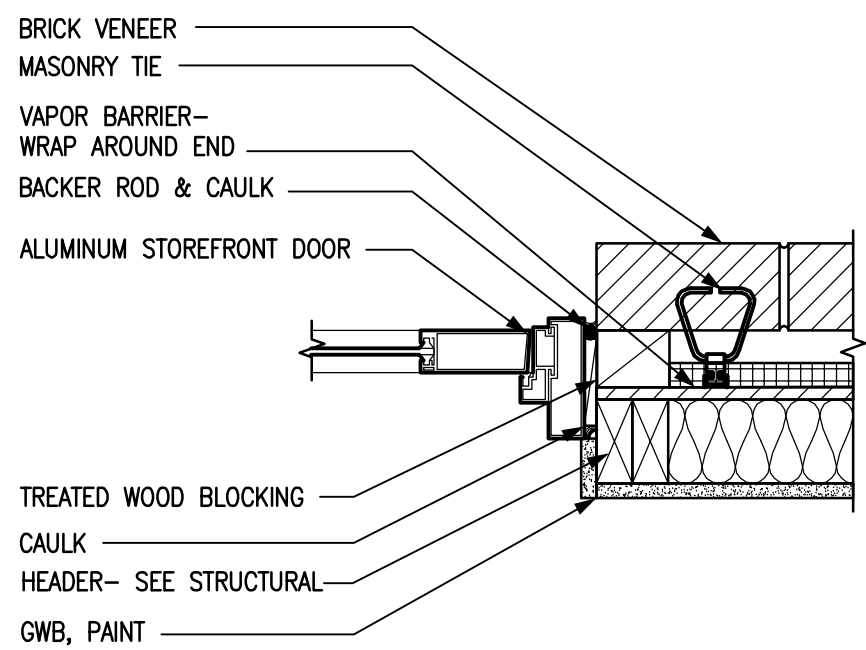
A3.2



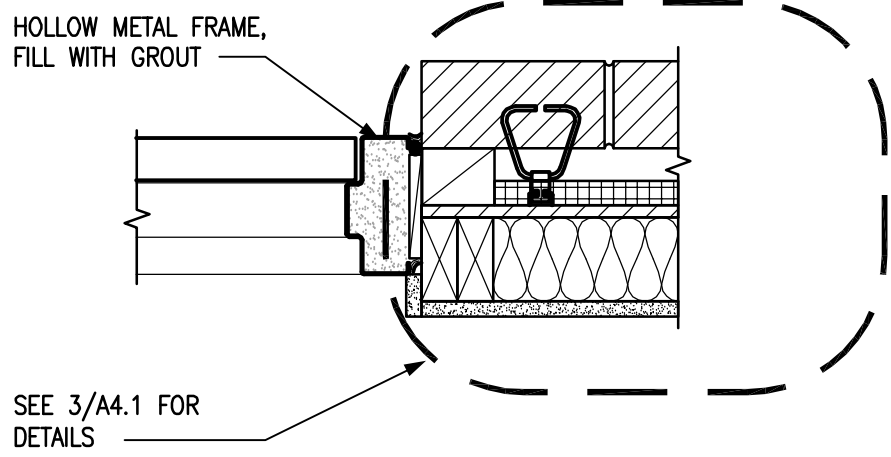
1 HEAD- DOORS 101A & 101B
A4.1 SCALE: 1-1/2" = 1'-0"



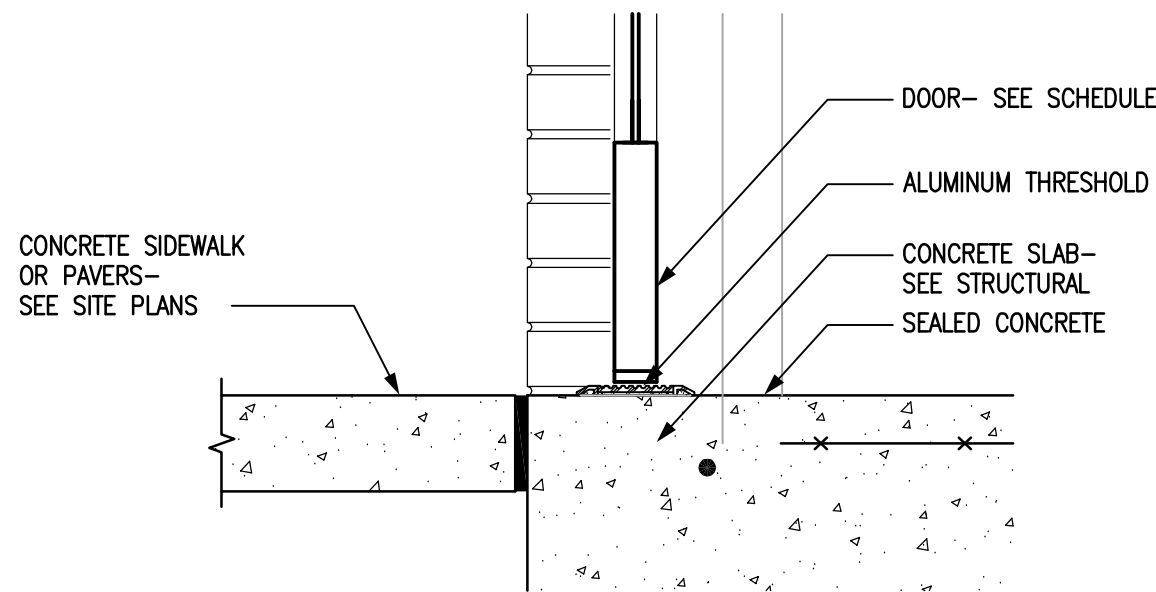
2 HEAD- DOOR 102
A4.1 SCALE: 1-1/2" = 1'-0"



3 JAMB- DOORS 101A & 101B
A4.1 SCALE: 1-1/2" = 1'-0"

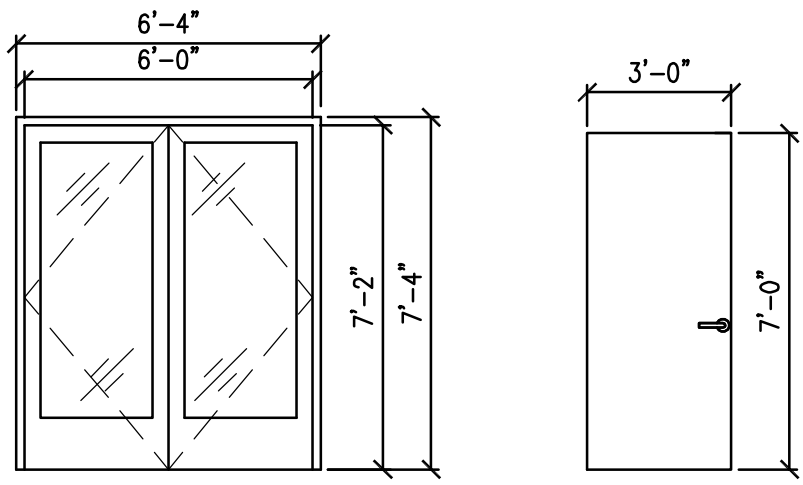


4 JAMB- DOOR 102
A4.1 SCALE: 1-1/2" = 1'-0"



5 SILL- ALL DOORS
A4.1 SCALE: 1-1/2" = 1'-0"

NOTES:
1. SPECIFIED DIMENSIONS ARE FOR DOOR ROUGH OPENING.
2. SEE THIS SHEET FOR TYP. DOOR FRAMING DETAILS.



SEE FOLLOWING TYPICAL DOOR FRAMING DETAILS:
1/A4.1- HEAD,
3/A4.1- JAMB,
5/A4.1- SILL

SEE FOLLOWING TYPICAL DOOR FRAMING DETAILS:
2/A4.1- HEAD,
4/A4.1- JAMB,
5/A4.1- SILL

6 DOOR ELEVATIONS
A4.1 SCALE: 1/4" = 1'-0"

ROOM FINISH SCHEDULE:

ROOM NO.	ROOM NAME	FLOOR		WALLS				CEILING		REMARKS
		MATL	BASE	NORTH WALL	SOUTH WALL	EAST WALL	WEST WALL	MATL	HEIGHT	
100	OPEN PORCH	CONC	N/A	-	-	-	-	TGB	VARIES*	* VAULTED- SEE WALL SECTIONS
101	VENDING	SC	FC	PGWB	PGWB	PGWB	PGWB	PGWB	9'-4"	
102	STORAGE	SC	FC	PGWB	PGWB	PGWB	PGWB	PGWB	9'-4"	

FINISH LEGEND:

FLOOR FINISH		BASE FINISH		WALL FINISH		CEILING FINISH	
CONC	CONCRETE, BROOMED FINISH	FC	FIBER CEMENT	PGWB	PAINTED GYPSUM WALL BOARD	PGWB	PAINTED GYPSUM WALL BOARD
SC	SEALED CONCRETE					TGB	TONGUE & GROOVE BOARD

DOOR & FRAME SCHEDULE

DOOR				FRAME		HARDWARE GROUP (SEE NOTE 1)	HEAD	JAMB	SILL	REMARKS
DOOR NO	SIZE	MAT.	FINISH	MAT.	FINISH		SEE SHEET A5.1			
101A	3'-0"x7'-0"x1 3/4"	ALUM. GLASS	DARK BRONZE	ALUM.	CLEAR ANOD.	HW-1	1	3	5	
101B	3'-0"x7'-0"x1 3/4"	ALUM. GLASS	DARK BRONZE	ALUM.	CLEAR ANOD.	HW-1	1	3	5	
102	3'-0"x7'-0"x1 3/4"	HM	PANT	H.M.	PANT	HW-2	2	4	5	



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CONSULTANT:

WALL SECTIONS & DETAILS

PROJECT TITLE:
I-40/I-85 ALAMANCE COUNTY REST AREA VENDING BUILDINGS
MILE MARKER 139, BURLINGTON, ALAMANCE COUNTY, NORTH CAROLINA

SCO ID NO.	14-11287-01A
TIP PROJ. NO.	-
WBS NO.	3707.3.23
FEDERAL ID NO.	-
ASSET NUMBER: CO.# SITE.# BLDG.# 01 - 013 - X	
REVISIONS NO.	DATE
DATE ISSUED:	4-23-15
DRAWN BY:	AS
CHECKED BY:	LUK
SHEET NO.	

A4.1

GENERAL NOTES – PLUMBING

1. PREPLAN ALL WORK PRIOR TO ORDERING, PURCHASING, OR FABRICATING ANY PART OF THE WORK DESCRIBED BY THIS DRAWING.
2. IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS WITH EXISTING FIELD CONDITIONS OR THE WORK OF OTHER TRADES.
3. RESOLVE ALL CONFLICTS PRIOR TO INCURRING ANY MATERIAL OR LABOR EXPENSES.
4. COMPLY WITH THE MANUFACTURER'S TECHNICAL INSTRUCTIONS WHEN INSTALLING PLUMBING FIXTURES, MATERIALS, AND DEVICES.
5. LOCATE FIXTURES AND EQUIPMENT GENERALLY AS SHOWN ON THE PLANS. HOWEVER, COORDINATE LOCATIONS WITH ACTUAL FIELD CONDITIONS TO PRESERVE ALL CODE-REQUIRED AND MANUFACTURER – REQUESTED SERVICE CLEARANCES.
6. COORDINATE ROUTING OF ALL PIPING WITH BUILDING STRUCTURE AND WITH THE WORK OF OTHER TRADES. OFFSET VENT PIPING AROUND BEAMS AND JOISTS AS NECESSARY.
7. AT EXTERIOR WALL, INSTALL WATER PIPING ON HEATED SIDE OF WALL INSULATION.
8. PROVIDE WATER HAMMER ARRESTORS AT THE END OF EACH COLD WATER BRANCH RISER. SIZE ARRESTOR APPROPRIATELY.
9. PROVIDE CONCRETE RING FOR ALL EXTERIOR CLEAN-OUTS.
10. REVIEW SITE PLAN FOR UTILITIES AND ORIENTATION PRIOR TO START OF WORK.
11. G.C. TO PROVIDE ROOF PENETRATIONS.

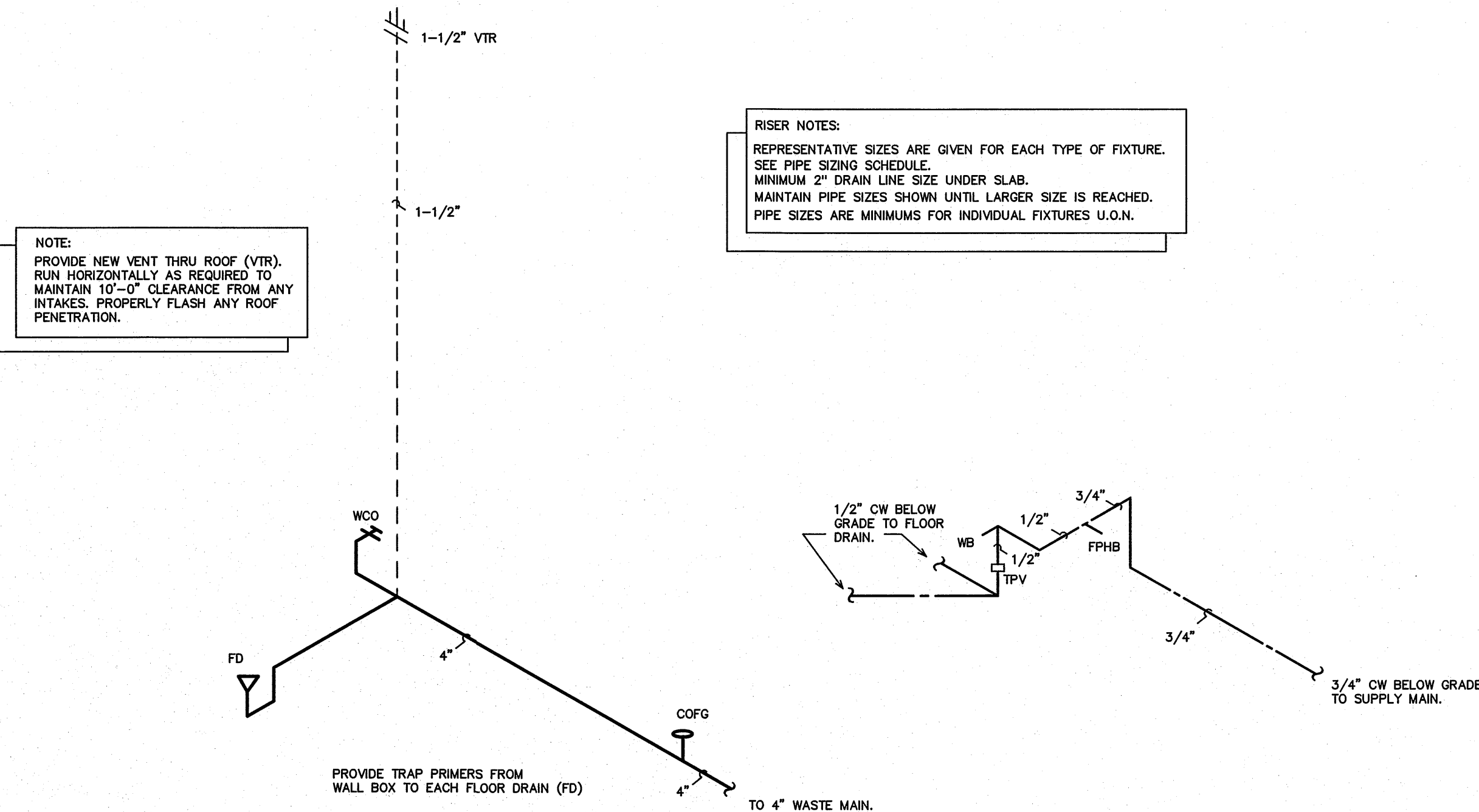
PLUMBING FIXTURE SCHEDULE *

MARK	DESCRIPTION	ALTERNATE MANUFACTURER/MODEL	ALTERNATE MANUFACTURER/MODEL
FD	FLOOR DRAIN ZURN ZN-415 WITH DEEP SEAL P-TRAP, 5" X 5" TYPE "S" SQUARE STRAINER AND 3" CONNECTION, VANDAL-PROOF TOP.	JOSAM #30000-S.	JAY R. SMITH #2005-B.
VB	VALVE BOX OATEY GALVANIZED METAL VALVE BOX #38686 WITH 1/4" TURN BRASS BALL VALVE.	IPS GUY GRAY #MIB1AB	LSP # OB-504
FPHB	FREEZE-PROOF HOSEBIBB ZURN Z-1320-C, 3/4" NON FREEZE WALL HYDRANT WITH VANDAL RESISTANT VACUUM BREAKER, ENCASED WITH KEY LOCK.	JAY R. SMITH #5509QT.	WATTS HY-725.
TPV	TRAP PRIMER VALVE PPP INC. MODEL# PR-500, 1/2" INLET, 1/2" OUTLET	JOSAM #98300.	WATTS #A200.

(VERIFY ALL EQUIPMENT REQUIREMENTS PRIOR TO ROUGH-IN)

PIPE SIZING SCHEDULE				
FIXTURE TYPE	DRAIN	VENT	CW	HW
(FPHB) FREEZE PROOF HOSE BIBB	-	-	1/2"	-
(VB) VALVE BOX	-	-	1/2"*	-
(FD) FLOOR DRAIN	3"	1 1/2"	-	-

* PROVIDE BACKFLOW PREVENTER PER NCSB-PLUMBING SECT. 608.3, AND ASSE 1024 (WATTS SERIES 7 OR EQUAL) OR ASSE 1022 (WATTS SERIES SD-3 OR EQUAL) WHERE REQUIRED.

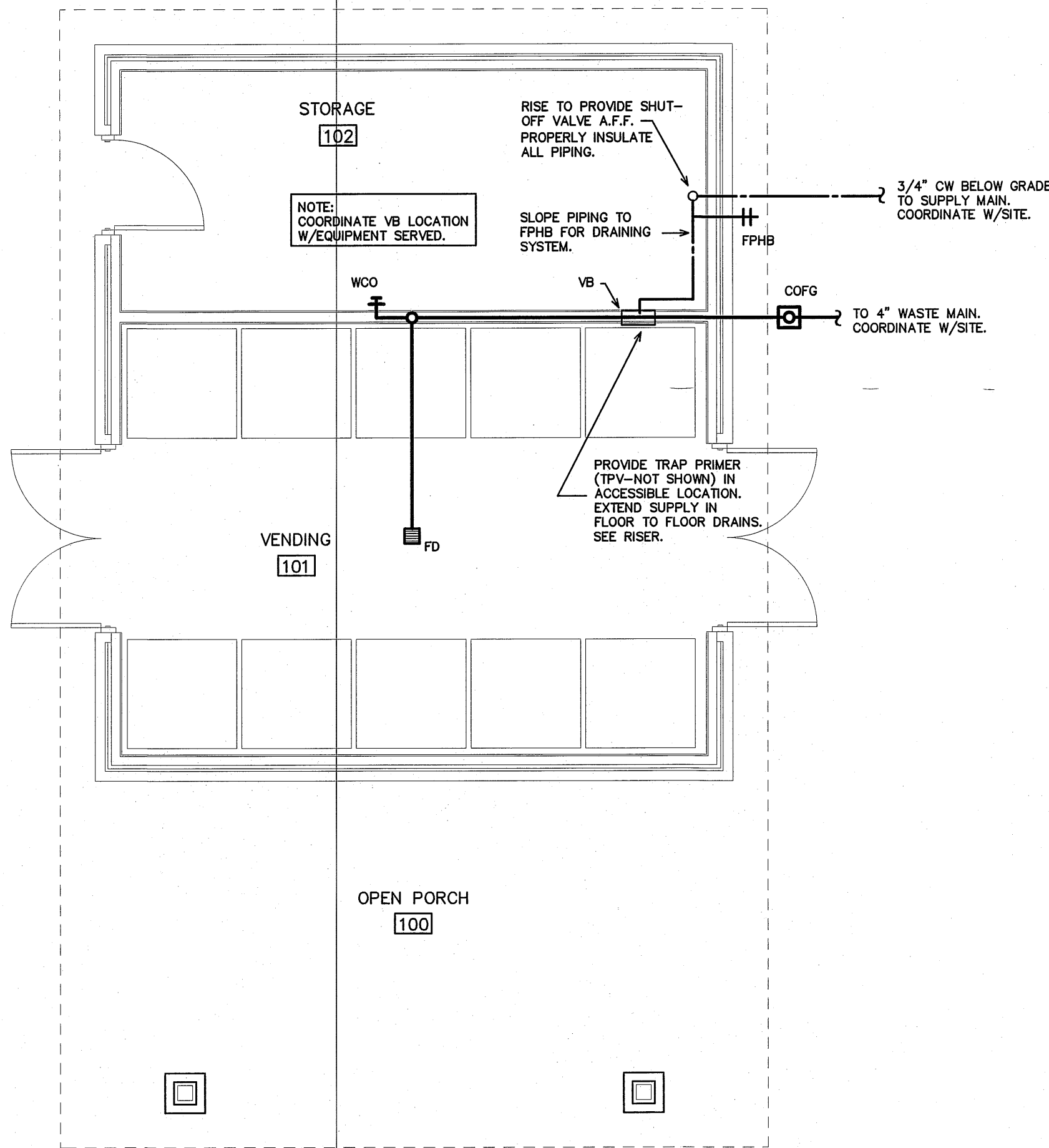


2
P1 PLUMBING RISERS
SCALE: NOT TO SCALE

SYMBOL LEGEND – PLUMBING

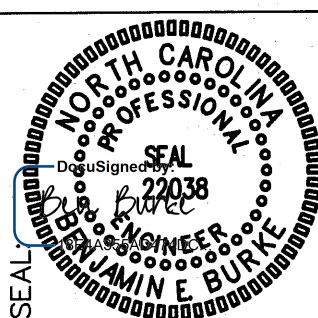
SYMBOL	DESCRIPTION
—	WASTE PIPING (W)
- - - - -	VENT PIPING (V)
—	COLD WATER PIPING (CW)
—	HOT WATER PIPING (HW)
○ COFF	CLEANOUT FINISH FLOOR
⊥ WCO/HCO	WALL/HORIZONTAL CLEANOUT
□ COFG	CLEANOUT FINISH GRADE-PROVIDE FLUSH CONCRETE COLLAR AND BRONZE COVER
—	FREEZE PROOF HOSE BIBB (FPHB)
⋈	SHUT-OFF VALVE
⊥	VENT THRU ROOF (VTR)
A.F.F.	ABOVE FINISHED FLOOR

NOTE:
SEE SITE UTILITY PLANS FOR SCOPE OF PLUMBING SITE
WORK. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL
PIPING, ETC AS REQUIRED.
THE FLOORPLANS SHOWN REPRESENT BUILDINGS ON BOTH
THE NORTH BOUND AND SOUTH BOUND LANES.



1
P1 PLUMBING PLAN
SCALE: 1/4" = 1'-0"

CONSTRUCTION DOCUMENTS



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email: denburke@nc.rr.com
Corp. License # C-2652

DRAWING TITLE / DESCRIPTION:
**PLUMBING
PLAN**

PROJECT TITLE:
**I-40/I-85 ALAMANCE COUNTY
REST AREA VENDING BUILDINGS**
MILE MARKER 139, BURLINGTON,
ALAMANCE COUNTY, NORTH CAROLINA

SCO ID NO. 14-11287-01A
TIP PROJ. NO. -
WBS NO. 3707.3.23

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ASSET NUMBER:
CO.# SITE.# BLDG.#
01 013 X

REVISIONS
NO. DATE

DATE ISSUED: 4-23-15
DRAWN BY: DS
CHECKED BY: BEB

SHEET NO.

P1

MECHANICAL SYSTEMS AND EQUIPMENT

METHOD OF COMPLIANCE:
Prescriptive ☒ Energy Cost Budget ☐

Thermal Zone 4a

Exterior Design Conditions
winter dry bulb 22 F
summer dry bulb 94 F

Interior Design Conditions
winter dry bulb 72 F
summer dry bulb 75 F
relative humidity 50%

Building Heating Load 8,400 BTU/hr

Building Cooling Load 11,800 BTU/hr

Mechanical Space Conditioning System
Unitary - The building is served by (1) 1.5 ton ductless split system heat pump
Boiler - Not applicable to this project.
Chiller - Not applicable to this project.

Equipment efficiencies
Efficiencies and outputs are listed on equipment schedules - See drawings.

Equipment schedules with motors.
Motors used on this project are included in the efficiency rating of the unit. See drawings for efficiencies.

Alamance Vending M1	
DUCTLESS SPLIT SYSTEM HEAT PUMP SCHEDULE	
DHP-1 OUTDOOR HEAT PUMP UNIT	* MITSUBISHI MODEL #MUZ-GE18NA, 1.5 TON OUTDOOR HEAT PUMP UNIT, 19.2 SEER, 230 VOLT, 1 PHASE, CONDENSING UNIT 14A MCA, 20A MOCP. UNIT HAS STANDARD LOW AMBIENT COOLING. (14 DEGREE F.) FAN COIL UNIT IS POWERED VIA FACTORY PROVIDED FIELD INSTALLED POWER CABLE FROM OUTDOOR UNIT. THE POWER CABLE IS ROUTED WITH-IN THE REFRIGERANT LINE SET. PROVIDE THE MC CABLE SET SOUTHWIRE "EZ IN Mini-Split Cable".
DFC-1 DIRECT EXPANSION FAN COIL UNIT	* MITSUBISHI MODEL #MSZ-GE018NA FAN COIL UNIT. NET COOLING CAPACITY = 17,200 BTUH, 230 CFM LO TO 533 CFM HI. 1.5 TON NOMINAL. PROVIDE WIRED WALL MOUNTED PROGRAMMABLE THERMOSTAT (MITSUBISHI MODEL PAR-21MAA). FAN MOTOR 0.75, FLA 230 VOLT. SINGLE PH.

* OR APPROVED EQUAL

EXHAUST FAN EQUIPMENT SCHEDULE	
EF-1	
EXHAUST FAN (EF-1)	* CARNES MODEL# VBK10-M2 IN-LINE DIRECT DRIVE EXHAUST FAN, 500 CFM @ 3/8" SP, 1000 RPM, 1/3 HP, 115V, 1 PHASE. THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE SWITCH AND WIRE THE UNIT. THE HVAC CONTRACTOR SHALL PROVIDE UNIT. PROVIDE VIBRATION ISOLATION ON (4) FOUR THREADED ROD SUPPORTS. DISCONNECT SWITCH ON FAN HOUSING. LOCATE EXHAUST TERMINATION A MINIMUM OF 10'-0" FROM ANY INTAKES. PROVIDE FACTORY SPEED CONTROLLER FOR BALANCING ONLY.

* OR APPROVED EQUAL BY GREENHECK, OR PENN FANS.

AIR DISTRIBUTION SCHEDULE						
MARK	* MANUFACTURER	MODEL NO.	FACE SIZE	MATERIAL	SERVICE	NOTES
EA	CARNES	RATA	18" X 18"	ALUMINUM	EXHAUST	WHITE, GYPSUM BOARD CEILING

COORDINATE BORDER TYPE WITH THE CEILING TYPE. SEE ARCH SHEETS.
PROVIDE CUT SHEETS TO OWNER/ARCH. PRIOR TO ORDERING.

* OR APPROVED EQUAL BY TUTTLE & BAILEY, OR METALAIR

* ** PROVIDE ROUND TO RECTANGULAR DUCT TRANSITION ON GRILLE.

KEY NOTES FOR 1/M1

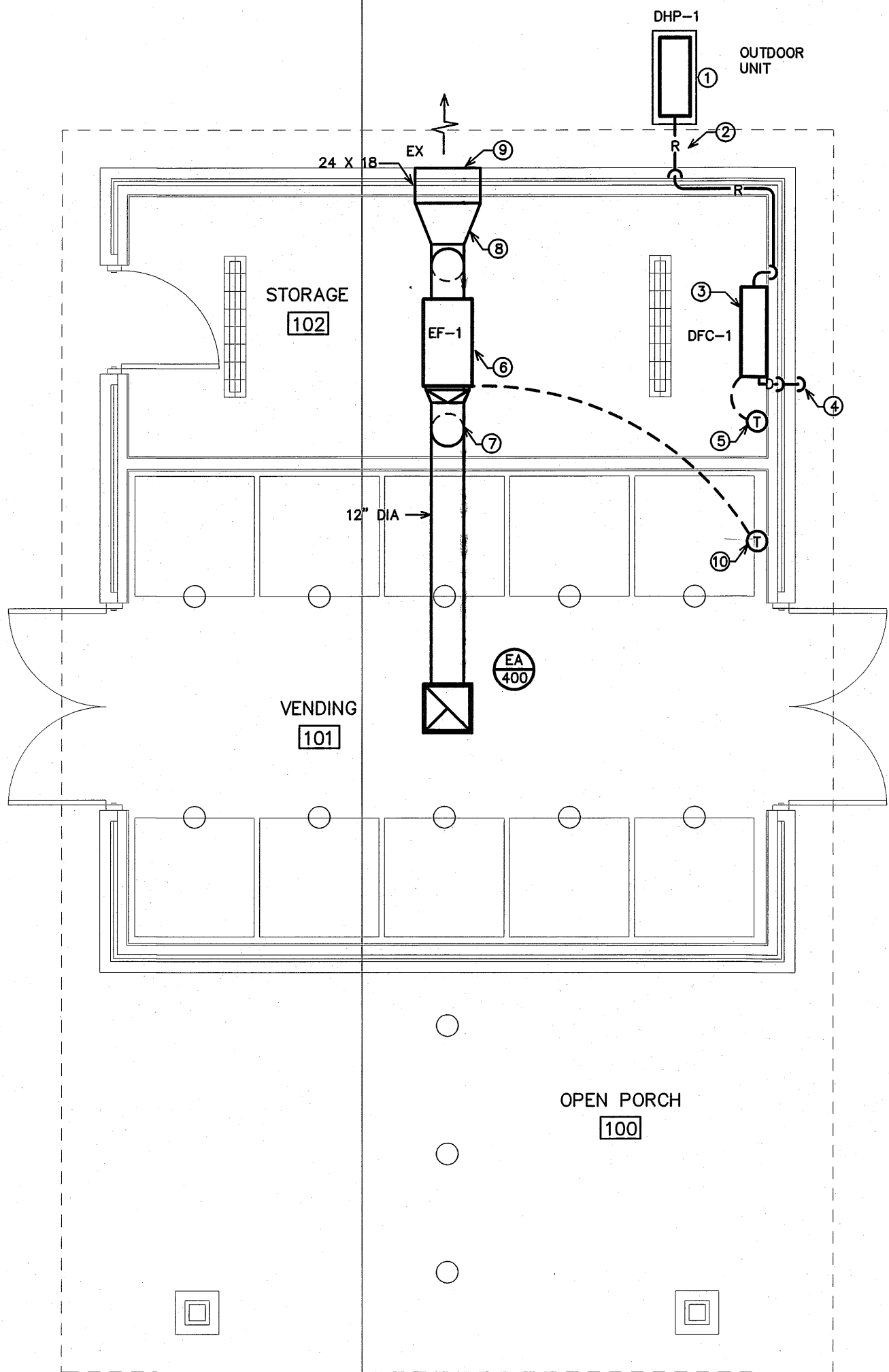
- HEAT PUMP UNIT MOUNTED ON A 4" "POURED IN PLACE" CONCRETE PAD.
- RUN THE REFRIGERANT LINES CONCEALED IN THE EXTERIOR WALL. SEAL WALL PENETRATION. PAINT ALL EXPOSED, EXTERIOR INSULATION WITH UV RESISTANT PAINT.
- DUCTLESS SPLIT SYSTEM FAN COIL UNIT MOUNTED ON WALL WITH TOP AT 12" BELOW FINISH CEILING.
- RUN CONDENSATE DRAIN TO THE EXTERIOR. CONCEAL IN EXTERIOR WALL. INSULATE THE ENTIRE LENGTH. TURN DOWN INTO THE PLANTING AREA.
- WALL MOUNTED THERMOSTAT. MOUNT AT 48" AFF.
- IN-LINE EXHAUST FAN ABOVE CEILING. SUPPORT FROM STRUCTURE WITH (4) 3/8" ALL THREADED STEEL RODS. PROVIDE VIBRATION ISOLATION ON EACH ROD. MOUNT AS HIGH AS POSSIBLE
- RUN DUCT ABOVE VENDING CEILING. DROP DOWN AS REQUIRED IN STORAGE ROOM TO ALLOW DUCT CONNECTION TO FAN. TRANSITION BACK UP TO EXTERIOR GABLE VENT.
- TRANSITION DUCT AS REQUIRED TO EXTERIOR GABLE VENT.
- RUN 24 X 18 DUCT TO BACK OF EXTERIOR GABLE VENT. PROVIDE SCREEN WIRE OVER END OF DUCT. SECURELY FASTEN DUCT TO VENT.
- MOUNT THERMOSTAT ON WALL ABOVE TOP OF VENDING MACHINE.

LEGEND - MECHANICAL

- 12 X 8

RECTANGULAR GALVANIZED STEEL DUCTWORK
- 12" DIA.

RIGID ROUND GALVANIZED STEEL DUCTWORK
- EXHAUST GRILLE
- THERMOSTAT
MOUNT AT 48" AFF
- 3/4 IN PVC CONDENSATE DRAIN PIPING
- REFRIGERANT PIPING



1 HVAC PLAN
M1 SCALE: 1/4" = 1'-0"

CONSTRUCTION DOCUMENTS

SEAL:

NORTH CAROLINA
REGISTERED PROFESSIONAL
SEAL
220338
BURKE
DESIGN GROUP, P.A.
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CONSULTANT:

ENGINEER

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3305-109 Durham Drive
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Phone: 919-707-4540
email: bemburke@bndg.com
Corp. License # C-2652

DRAWING TITLE / DESCRIPTION:
HVAC
PLAN

PROJECT TITLE:
1-40/1-85 ALAMANCE COUNTY
REST AREA VENDING BUILDINGS
MILE MARKER 139, BURLINGTON,
ALAMANCE COUNTY, NORTH CAROLINA

SCO ID NO.

14-11287-01A

TIP PROJ. NO.

-

WBS NO.

3707.3.23

FEDERAL ID NO.

ASSET NUMBER:

CO.# SITE.# BLDG.#

01 = 013 = X

REVISIONS

NO. DATE

DATE ISSUED:

4-23-15

DRAWN BY:

WBE

CHECKED BY:

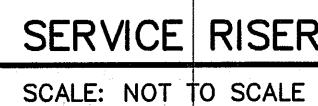
BEB

SHEET NO.
M1

E1

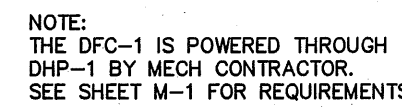
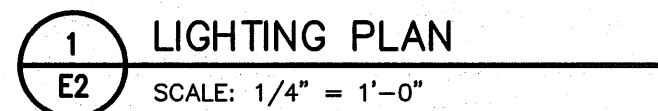
RISER WIRING SCHEDULE

- VERIFY AVAILABLE FAULT CURRENT AT SERVICE LOCATION WITH LOCAL POWER COMPANY. PROVIDE INFORMATION TO ENGINEER TO CALCULATE MINIMUM PANEL AIC RATING PRIOR TO RELEASING GEAR. AIC RATING ON PANELS ARE FOR PERMIT REVIEW AND PRICING ONLY. EC SHALL PROVIDE LABELING INDICATING FAULT CURRENT AT SERVICE ENTRY AND ON ALL PANELS PRIOR TO CO.

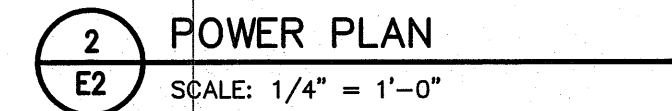


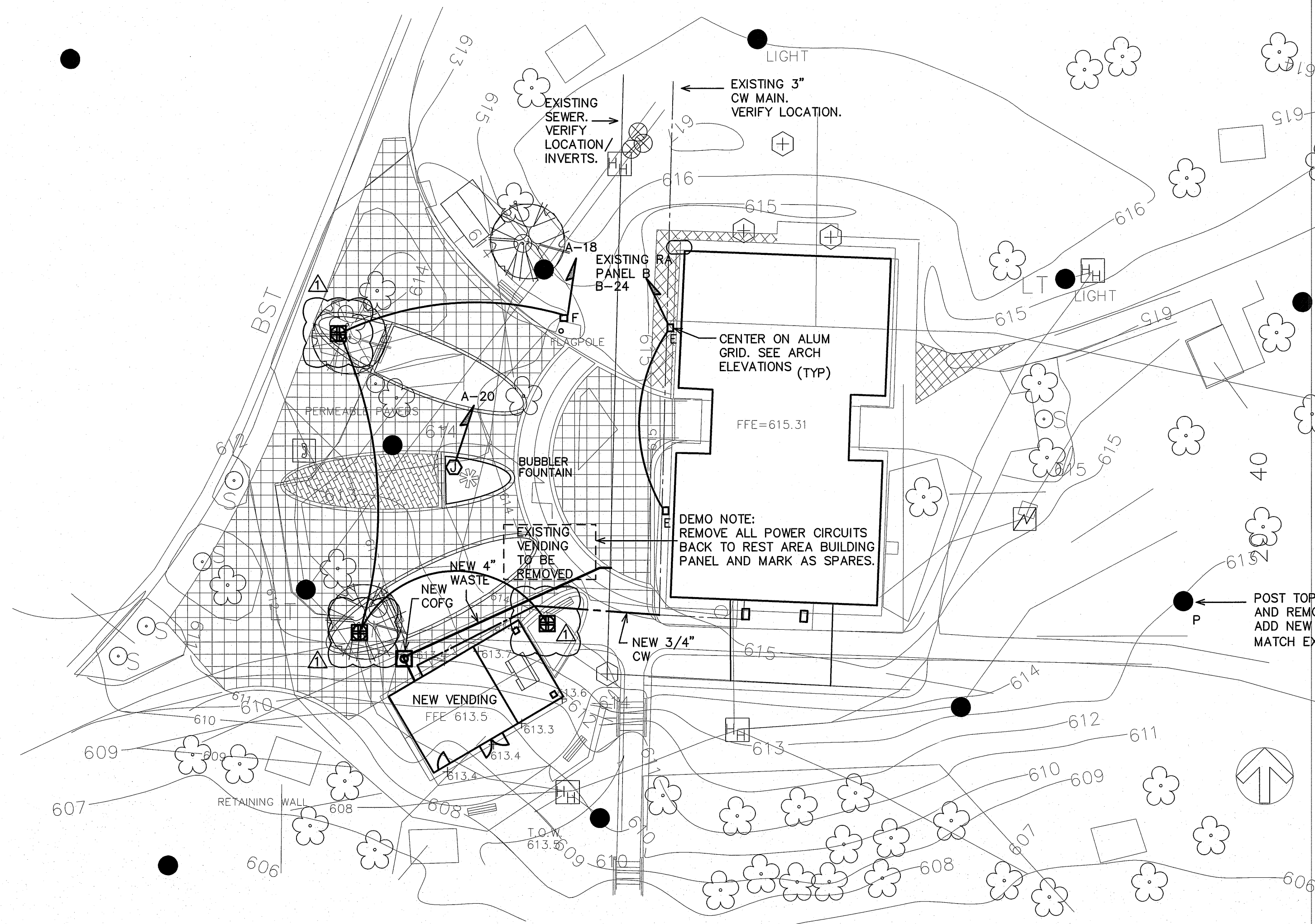
NOTE:
SEE SITE UTILITY PLANS FOR SCOPE OF ELECTRICAL SITE WORK. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LIGHTING AND POWER AS REQUIRED.

THE FLOORPLANS SHOWN REPRESENT BUILDINGS ON BOTH THE NORTH BOUND AND SOUTH BOUND LANES.



NOTE:
ALL VENDING RECEPTACLES ARE
GFCI PROTECTED WITH GFCI BREAKERS

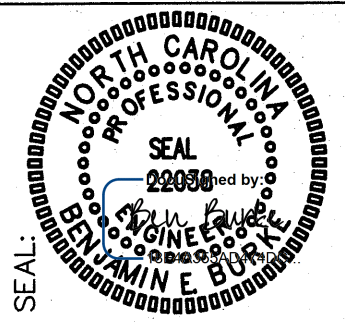




SITE LIGHTING MUST REMAIN OPERABLE THROUGHOUT CONSTRUCTION.

1 NBL UTILITY PLAN
U1 SCALE: 1" = 20'

CONSTRUCTION DOCUMENTS



DESIGNED BY:
FACILITIES DESIGN
ARCHITECTS & ENGINEERS
FACILITIES MANAGEMENT DIVISION, NC001
1 SOUTH WILMINGTON STREET
RALEIGH, NORTH CAROLINA 27601
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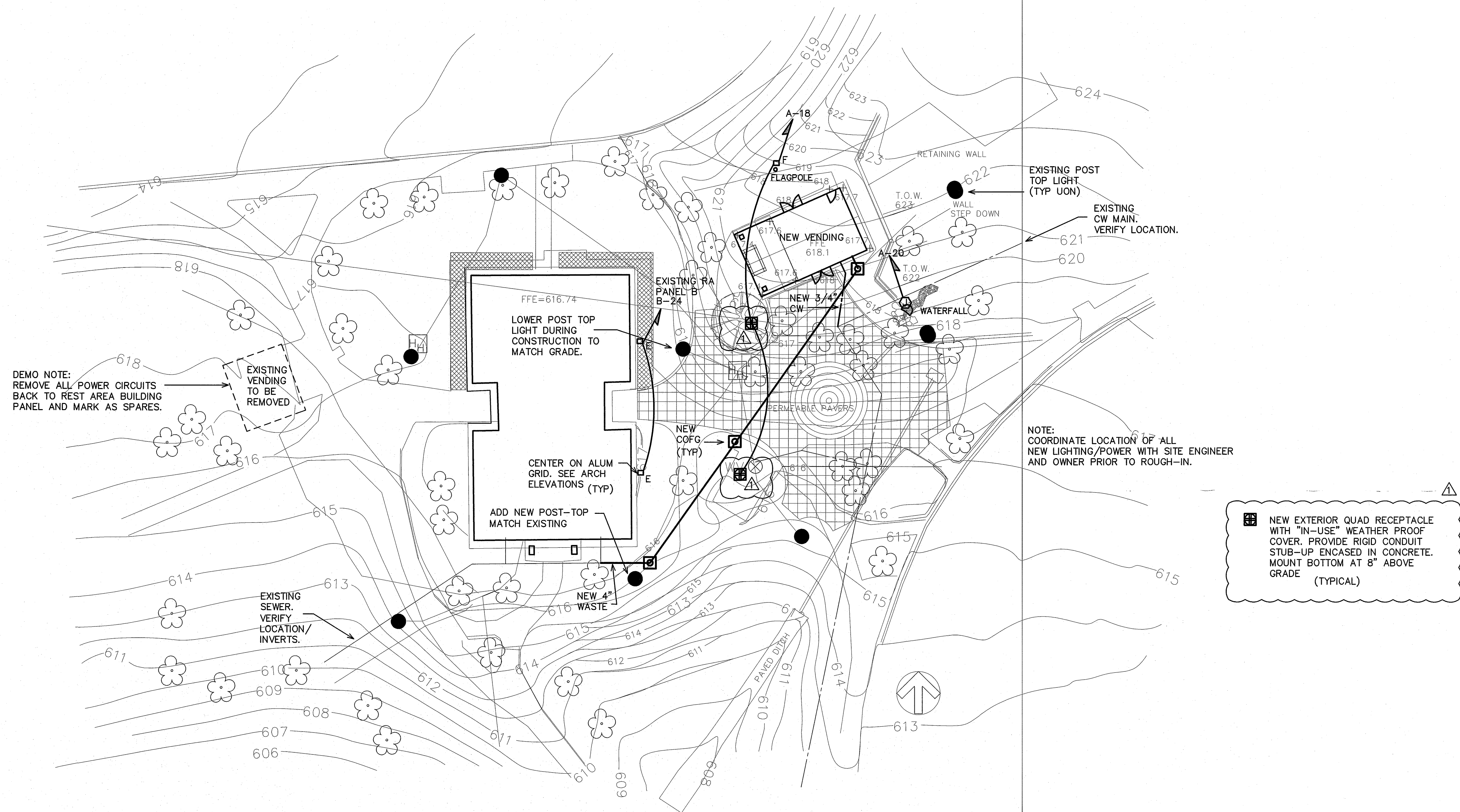
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DRAWING TITLE / DESCRIPTION:
NBL UTILITY PLAN

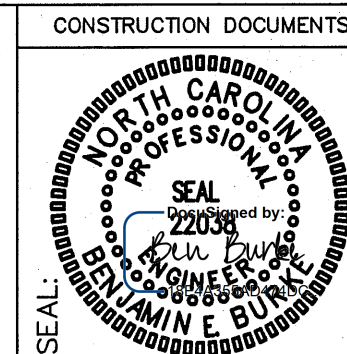
PROJECT TITLE:
I-40/I-85 ALAMANCE COUNTY REST AREA VENDING BUILDINGS
MILE MARKER 139, BURLINGTON, ALAMANCE COUNTY, NORTH CAROLINA

SCO ID NO.	14-11287-01A
TIP PROJ. NO.	-
WBS NO.	3707.3.23
FEDERAL ID NO.	-
ASSET NUMBER: CO.# SITE.# BLDG.#	
01 - 013 - X	
REVISIONS	
NO.	DATE
1	5/04/15
DATE ISSUED: 4-23-15	
DRAWN BY: DS	
CHECKED BY: BCB	

SHEET NO.
U1



SITE LIGHTING MUST REMAIN OPERABLE THROUGHOUT CONSTRUCTION.



DESIGNED BY:
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DRAWING TITLE / DESCRIPTION:
SBL UTILITY PLAN

PROJECT TITLE:
I-40/I-85 ALAMANCE COUNTY REST AREA VENDING BUILDINGS
MILE MARKER 139, BURLINGTON, ALAMANCE COUNTY, NORTH CAROLINA

SCO ID NO.	14-11287-01A
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1	5/04/15
DATE ISSUED: 4-23-15	
DRAWN BY: DS	
CHECKED BY: BEB	

SHEET NO.
U2

